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Vol. 2

The Phonetic Structure of English Words

E. Kruisinga



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By the same author:

- A Grammar of the Dialect¹ of West-Somerset, descriptive and historical. 1905. P. Hanstein. Bonn. Bonner Beiträge zur Anglistik, Heft XVIII.
- A Handbook of Present-Day English. Part I. English Sounds. One volume. Fourth Edition. 1925. Part II. Accidence and Syntax. Three volumes. Fifth Edition. 1932. P. Noordhoff. Groningen.
- An English Grammar. Vol. I. Accidence and Syntax. Sixth Edition. 1941. Vol. II. Grammar and Idiom. Fourth Edition. 1935. P. Noordhoff. Groningen.
- An Introduction to the Study of English Sounds. Seventh Edition. 1940. P. Noordhoff. Groningen.
- A Syllabus of English Syntax. 1937. P. Noordhoff. Groningen.
- A Grammar of Modern Dutch. 1924. Allen and Unwin. London.
- Het Nederlands van Nu. 1938. Wereldbibliotheek. Amsterdam.
- Einführung in die deutsche Syntax. 1935. P. Noordhoff. Groningen.
- Taal en Maatschappij. Rede. 1909. P. Noordhoff. Groningen.
- Het Taalbegrip van Dryden. 1929. P. Noordhoff. Groningen.
- De Bouw van het Engelse Woord. Mededelingen van de Ndl. Akademie van Wetenschappen, Afd. Letterkunde, Vol. IV no. 8. 1941. Noord-Hollandse Uitgeversmaatschappij.
- Diminutieve en Affektieve Suffixen in de Germaanse Talen. ib. Vol. V no. 9. 1942.

PREFACE

When I received the request to provide an English translation of my study on the phonetic structure of English words, published less than a year before in the works of the Nederlandse Akademie van Wetenschappen, I readily acceded. But it was clear to me from the outset that a translation would imply a revision, and at least some enlargement of the original work; this was primarily possible with the help of my own notes, but I am also pleased to acknowledge the assistance of some of my readers who sent me their observations, which coincided in one or two cases with those of the reviewers who had taken early notice of my Dutch essay.

The result is that the translation has something of the character of a book, if of a modest size. All the chapters have been carefully revised, those on Form-Words and Word-Groups and on Word-types being more or less completely new; the retrospect now includes an attempt to show the value of the preceding observations for the historical study of English. In spite of all these changes, however, I am fully aware that we are only at the beginning of an exploration that will prove of great importance to linguistic studies: the best hope, consequently, is that this book may be superseded, in the course of a few years, whether by a new edition or a book of another scholar who may raise a more important structure, for which the present work may supply at least some of the materials.

Koninginnegracht 75,
The Hague, September 1942.

E. Kruisinga.

P. S. When the whole of this book was ready for the press I was informed that the fourth edition of the *Handbook of Present-Day English*, to which frequent reference is made in the following pages, had run out of print. A revised edition of the volume may be expected in the course of this year (1943).

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I.

The Syllabic Sounds of Standard English

The phoneticians of the nineteenth century considered it a great discovery that a word is not a phonetic unit: a sentence consists of syllables, syllables consist of one or more sounds, and these sounds are the result of combinations of more or less completely contemporaneous activities of the organs of speech. And when we consider a sentence as a phonetic whole, this conception appears to have much to be said in its favour, indeed to be still valuable. When one observes, for instance, that in the incomparable and much neglected transcriptions of Sweet a word like *jumped* at one time appears as ending in the group -mt, at another in -mpt, we are justified in saying that the form of the word is not fixed, but depends on its service in the sentence. And it can be shown what is the cause of its variable form: we find -mt when the next word begins with a consonant, e. g. in *jumped down* (*Primer of Spoken English*, p. 54, l. 20), but -mpt before a vowel, as in *jumped up* (ib. p. 53, l. 13, and elsewhere), also before a conjunction that introduces another clause, as in *We jumped as if we'd been shot* (ib. p. 60, l. 1). The same applies to words like *plunged*, which has a d before its sibilant only when a vowel follows, i. e. when the group -dʒ- opens the following syllable, as in *plun-ging*, *plun-ges*; see *Introduction* ⁷, §§ 245 and 257.

But one goes too far when one denies a word all phonetic independence, and it must be said that the great phoneticians of the last century never pushed the theory that a word was not a phonetic unit to such an extreme: that is rather the business of imitators who seek for notoriety. Nor is it a novel discovery that a word is phonetically characterized as a unit, for in Wilhelm von Humboldt's essay on *Die Verschiedenheit des Menschlichen Sprach-*

baues one can find a separate chapter on the Bezeichnungsmittel der Worteinheit (Sprachphil. Werke, ed. Steinthal, p. 411 ff.). On the psychological reality of words, also in the minds of untrained speakers, Sapir has communicated some interesting observations in his instructive book *Language* (1921), p. 34 ff. In any case, no objection is likely to be made at the present day when a study is devoted to the word considered as a phonetic unit; the remembrance of the earlier view may be of value as a warning against exaggeration, i. e. against misconception in the opposite direction.

The questions that may be put are primarily three: 1. What are the syllabic sounds? 2. How is the beginning and the end? 3. How is the middle? In answering these questions care must be taken to distinguish stems from inflected, derived, and compound words. The language that will be considered here is exclusively the standard form of British English; that such a standard form exists, need not be argued at the present day, although the character of such a standard form varies according to the social and other historical circumstances in each linguistic community, on which the reader may be referred to *Taal en Leven V* (1942), p. 106 ff., 189 ff., and 211. It must also be pointed out that no mention will be made here of the analysis of the single sounds that occur in standard English nor of the ways in which they are joined, for all this has been done so admirably by earlier phoneticians, in the first place by Sweet and Sievers, that their successors have only been able to scrape together some scanty gleanings. Attempts have recently been made by students who claim the title of phonologists instead of phoneticians, to arrange the sounds of a language in a special way; it seems doubtful to the present writer whether these novel attempts have served to increase our insight into the nature of the sounds and their functions in the languages concerned, but no one can foretell what may grow out of these studies, so that I only state my intention

of restricting myself to the three questions that have been enumerated above. I shall include the consideration of interjections, which seems all the more necessary because the boundaries between words in the full sense of the term and interjections is not clearly marked. That the two are not identical, in other words, that interjections show a character of their own, even appears in the single sounds that are used in them, for when Gilbert Frankau, in his novel *Martin Make-Believe*, writes as follows: And there, her thoughts checked—for a long while, with the oak grandfather's clock ticking steadily; and little flames *phutting* from the coal in the fireplace; and outside, beyond the casement, the wheel of Ernest's barrow clicking as he trundled it from path to path. (ch. 6, p. 55), there seems no doubt that he used the spelling *ph* to indicate the lip-consonant, not the lip-teeth sound that is used in other English words, unless as the result of adaptation in such groups as *emphasis*, *off-wheel* ¹).

The syllabic sounds in English are the vowels and diphthongs, and the vowellikes *l*, *m*, *n*, but the velar nasal *ŋ* and *r* are not so used, which requires an explanation. For the syllabic use of the other sounds is what is probably found in all kinds of languages, and follows from their natural sonority. By diphthongs we always mean falling diphthongs in English, as in *night* and *brown*, or the less evidently diphthongic sounds in *mate* and *note*, which are sometimes distinguished as half-diphthongs, on which see *Introduction* ⁷, § 28. A remarkable class of diphthongs in English are the murmur-diphthongs, as in *care*, *fear*, *poor*; their peculiar character is due to the final element, which is naturally more sonorous than the first and syllabic element of the diphthong, especially when the first element is one of the high vowels, such as

¹) On the term *adaptation*, see *Introduction* ⁷, p. 45. Since I wrote this I happened to look up the *New English Dict.* s. v. *ph*, where the same explanation is suggested for the interjections *phew*, *pho*, and *phoo*.

in peer or poor. The consequence of this is that the monosyllabic character of the groups is sometimes doubtful, especially when they are final, as in fire, power; on the other hand, the medial murmur-diphthongs are sometimes hardly to be distinguished from single vowels, as in Mary. This has induced me to class these diphthongs as unstable, i. e. liable to become dissyllabic, or to turn into rising diphthongs, on which the reader may consult the *Hand-book* ⁴, p. 80 ff. and 115 f. It may be added here that the murmur-diphthongs primarily occur at the end of words (the reader will remember that we are speaking of stems only, not of inflected, derived and compounded words), both with potential -r and without: hear, pear, poor, pour, etc.; and the triple groups of the types of fire and hour; without potential -r: idea, panacea, the only ones, with a strong-stressed final syllable that I can think of. It may also be observed here that the group [oɪə] never occurs in stems at all. The groups with a murmur-vowel are infrequent medially before -r with a following vowel; I can only mention theory, peony, Mary, fairy, canary, dairy, to vary. They are rare medially before a consonant in a closed syllable; this case is instanced by beard, ideal, real, theatre, fierce, pierce, scarce, and the literary words cairn and weird, although the latter is not uncommon in spoken English. The triple groups in diet, quiet, client, bias, riot, and iron are hardly distinctly monosyllabic, although such a form as the comparative quieter shows that the word is not clearly disyllabic either and the same applies to tired, which also has the comparative tireder (I have been tireder than I have felt for weeks), although I have never seen the latter comparative in print. It may be added that from iron is derived the adjective [ɑrənɪ] irony 'looking or tasting like iron', without a medial r, whereas the literary loanword irony is spoken with -r-, evidently according to the spelling and the form of the word in French; at any rate, the substantive irony is characterized as a loanword by its sounds. The obser-

vation about the form of beard and scarce also raises problems of the history of sounds, which I am not prepared to solve, but on which it is not the place to enter here. The murmur-diphthongs have never been treated in any detail by English or other phoneticians, partly because they were too familiar, at least to English phoneticians, partly because they were looked upon as one of the extraordinary points of the English sound-system; it should be noted, therefore, that they are not so rare as may sometimes be supposed, for they are perfectly common in South German dialects, as will be found noted by Sütterlin, *Lautbildung*³, p. 131 f.

According to some writers on phonetics the syllabic sounds of English meet and boot are vowels, at any rate in the pronunciation of many speakers; Sweet declared that he used diphthongs, and there can be no doubt that many speak the sounds, or the words with them, in that way. I consider Sweet's analysis the correct one, agreeing in this with the Dutch phonetician Eijkman, who had a thoroughly trustworthy knowledge of the details of the formation of English sounds. This applies not only to the pronunciation of Sweet himself, and that of many others, but also to the pronunciation of many who claim to speak a 'pure' vowel, at least in the South of England. Sweet transcribed the diphthongs of meet and boot as [ij, uw], and this has sometimes misled readers, so that it may not be superfluous to warn them that Sweet meant a vowel succeeded by another of a slightly higher tongue-position, but a *vowel*, without any trace of a friction, which might be suggested by the j and w of the transcription.

The syllabic use of l and the nasals m and n does not call for much comment, but it must be expressly stated that all three are almost exclusively used in weak-stressed syllables in this way, as in bottle, chasm, button. The only case of a syllabic vowel-like in standard English in a strong-stressed syllable is children, which I have never

heard pronounced otherwise, although some modern phoneticians declare that the word is frequently, indeed usually, spoken with the vowel of bit. Of course, this way of pronouncing the word is theoretically sure to occur, for there are not so very few people who 'manage' their pronunciation according to what is suggested by the spelling; I have even been told of people who insist upon saying mountain with the diphthong of say in the second syllable, and Miss Soames, an admirable phonetician of an earlier generation, states in her *Introduction to Phonetics* (Swan-Sonnenschein, 1891) that a teacher of elocution complained to her of headmistresses insisting that she should teach girls that sort of pronunciation. The race of language-improvers has naturally not died out, least of all among the non professional classes, and it is possible that the pronunciation of children with the vowel of bit has spread ¹). At any rate, it is certain that syllabic l in children occurs, and the usual practice to be satisfied with this statement, just as the layman is satisfied with the statements about the weather, does not seem to be recommendable for students of the structure of English. It is natural to look to the initial sibilant of children for an explanation if the isolated character of syllabic l in this word, for we know that the sonority of vowels is the smaller the higher the tongue-position, and also that the sonority of the sibilants is greater than of any other consonants. We might suggest, therefore, that the sonority

¹) Some readers may think it important in this connection to find that the *New English Dictionary* in 1889 indicated the syllabic sound as l only; but it must be considered that the statements of this in many respects authoritative work are not really quite satisfactory in the field of pronunciation. It is clear that these statements are often influenced by the spelling of the words, and the editors, first of all Murray, were partly Scotchmen and people from the North of England, as the study of the English language is one of the most neglected subjects in the university of Oxford; and in judging of what is current in standard southern English the editors were undoubtedly often guided by the spelling rather than by actual observation, even apart from the fact that they were not linguists in the modern sense of the word.

of *i* is swallowed up by that of the preceding sibilant; this might be strengthened by the consideration of onomatopoetic formations like *hiss* and *whist*, where the vowel undoubtedly represents the sibilantic sound, as it also does in Dutch *sissen*. But this is not satisfactory as an explanation of syllabic *l* in children when we remember that the monosyllabic *chill* is never pronounced otherwise than with the vowel of *bit*. And to complicate matters still further, it must be remembered that *milk* is transcribed by Sweet as *mjl̥k*; anyone who has been in England may be familiar with this pronunciation, if only from the milkman's call, for I have never heard it from educated speakers. But the form shows that the sibilant is not sufficient as an explanation, although it need not be ruled out completely, as I think can be shown. Both [*tʃɪldrən*] and [*mjl̥k*] seem to show that the sonority of *l* may prevail over that of *r* when the *l* is followed by a consonant; most readers will know that *children* is also spoken with checked *u* (of *book*), and this also occurs in Sweet's texts, in the form [*tʃʊldrən*], as on p. 83. 12. If the pronunciation of syllabic *l* in *children* is heard from speakers of standard English, and *milk*, still less *silk*, is never pronounced in that way by the same class, it may be due to the presence of the broad sibilant in the first word.

The statement that the syllabic vowellikes occur in weak-stressed syllables only implies that they do not occur in stems of one syllable, apart from form-words, as in [*brednbʌtə*] *bread-and-butter*. The syllabic vowellikes chiefly occur finally after a consonant, as in the cases already quoted (*bottle*, *chasm*, *button*) and between two consonants (*bread-and-butter*), less often before a vowel, as in *wonderfully*, *traveller*, *awfully*, all of them transcribed with syllabic *l* by Sweet. Of course, the difference between syllabic *l* and [əɫ] is very slight, so that it can be observed by a practised ear only. It must also be pointed out that syllabic vowellikes in final position occur after single consonants only, not after consonant-groups, so

that syllabic *n* in the final syllable of *London*, although actually used, does not represent standard English. This fact is all the more significant because the distinction between educated and non-educated speech is in England decided by public opinion only, there being no official authority, i. e. would-be authority, in this matter at all.

The important place of syllabic vowellikes in standard English makes it all the more necessary to explain why the velar nasal is not so used; this question is naturally connected with the one of its occurrence in general. As will be explained, or at any rate stated, in the next chapter, the use of the velar nasal is practically limited in English (standard and otherwise) to the end-position, as in *thing* and *talking*, or as part of the final group with *-k*, as in *think*. Medially it does not occur in stems at all, but exclusively in a small number of derivatives, as in *singer*, *springy* (a springy mattress, the weather is quite springy), and in the verbal *-ing*, as in *singing*, whether this is looked upon as derivative or inflectional, on which see *English Grammar*⁶, § 214, where the small number of words in *-ing* that are not formed from existing stems are also enumerated. The examples show that the velar nasal in final position occurs in strong-stressed syllables with close contact, never after free vowels; and secondly in the weak-stressed *-ing*. The question with regard to the peculiar position of the velar nasal in comparison to the other nasals may consequently be narrowed down to the question why *final -ŋ* in weak-stressed syllables never occurs syllabically; the answer seems to be that final *-ing* is not so reduced because the suffix has a clear function, differing in this respect from the final syllables of *bottle* and *button*. This answer may be all the more acceptable when it is considered that in dialectal English, where the velar nasal has the more usual *n* substituted for it, such a word as *going* is sometimes monosyllabic, as [gwain] in West-Somerset, according to Elsworthy's *Grammar of the Dialect of West-Somerset*. It is natural enough that

going should be distinguished in this way from the other verbal ings, for it has something of the character of a form-word in such groups as I am going to see him. And there are other traces of a more general development of this kind; thus, in the translation of Herodotus, in the Tudor Translations (a text dating from 1584), there occur such spellings as cryng, sayng, obayng for crying, saying, obeying. The conclusion may not be unacceptable that the absence of the velar nasal among the syllabic vowellikes is not due to its phonetic character in itself, but to the use of the syllable in the language. It need hardly be pointed out that syllabic ŋ occurs in other languages, thus in dialectal Dutch [dɛŋkŋ] for standard denke (Holland Dutch), or denken (in other parts of the country).

With regard to English r, it need only be observed that the sound occurs before vowels only, i. e. in a position where the syllabic vowellikes do not generally, or at least primarily, occur. Its character as a vowellike is most clearly apparent in groups with other consonants, such as try and cry, where it is assimilated in voice to the preceding stop, like the side-sound of please. In end-position in weak-stressed syllables it has coalesced with the preceding glide, to use Sweet's terminology.

II.

Stems of One Syllable

We can now turn to the second of the questions that we put in the introductory chapter: the beginning and end of words. As we here propose to deal with stems of one syllable only the question as to the character of the middle of the word does not call for any comment: it is naturally the syllabic element, as far as we can distinguish a middle from a beginning and an end of these words. But the great majority of these stems actually has a

beginning and an end distinct from the syllabic centre; and it seems most convenient first to deal with the minority of words that begin with a syllabic sound, i. e. a vowel or diphthong, or end in one, which is also a vowel or diphthong only, for it has already been shown that syllabic vowellikes do not occur in stems of one syllable. The reason for treating the stems of one syllable first is not only because they form the great majority of English words, but even more because they are actually used more frequently than most words of two and more syllables, and in studying the phonetic structure of a language it is important to remember that the importance of word-types does not only depend on their number but on their frequency in actual speech. The longer words, and by that we mean stems here, because the inflected, derived, and compounded words will be dealt with separately, are mostly of foreign origin, most of them being loanwords from French. This, however, does not concern us here, but the great majority of these longer words are in less frequent use, many of them belonging to the vocabulary of written or even literary English; the words of one stem that are of foreign origin, such as *base*, *type*, *duke*, on the other hand, do not differ in their phonetic position from the words of English origin. We shall therefore leave the origin of words out of consideration, as it should be done in any treatment of English as it is to-day, most of all in a consideration of the phonetic character of living English. For this reason not a word will be wasted here on the history of English; we shall consider words according to their use in actual life only, whether in speech or in writing, not according to any other criterion, which can only be a wrong one when one wishes to study the speech of the present.

The number of words that end in a real vowel is necessarily small in educated speech, for there are hardly any free vowels: as Sweet was the first to remark, even the vowels that are called free are hardly completely of

that character, because towards the end there is apt to be a change of articulation, however slight, so that even the vowels of path, stir, and sought especially, when final, approach the character of diphthongs. Apart from this, however, we can say that English has three free vowels, as in the interjection ah, and in stir, draw. Of these vowels the last only is used as a word in itself, in awe; this explains, no doubt, why the word is restricted to literary English, in other words, why it is on the road to extinction, contrasting in this respect with the derivative awful, which is as much alive as ever. The other two vowels occur as interjections, written ah and err-; even though interjections must be considered peculiar parts of speech, they should not be neglected in phonetics any more than in syntax. For this reason I add that the half-diphthongs also occur in this way, written eh and oh, and oo (with the vowel of moon), but not [ij], the vowel of see. Of these interjections oo is not frequent in print; it is used to express a mild fright, as when one suddenly finds oneself in complete darkness, and occurs in Priestley's *Good Companions* I., ch. 5, p. 168: The woman was even more astonished. As she stared her face fell. 'Oo, I'm sorry.'—The reason for this exclamation is that she has pursued a motor-car imagining that it contained the person wanted. Also in Swinnerton, *Nocturne* ch. 11.11, p. 237: 'Hang your hat and coat on the stand,' whispered Emmy (the two are entering the house in complete darkness), and went tiptoeing forward to the kitchen. 'Oo, she (her sister) is a monkey! She's let the fire out,' Emmy continued in the same whisper. The diphthong [au] expresses pain; there is an example in M. Kennedy, *Long Time Ago* T. p. 136.—The interjections that consist of a vowel or diphthong only will be again dealt with when we come to those that begin with an aspirate, on p.17; but some readers may think that I also ought to have mentioned the full word to err. This would be a mistake, however; it is true that it may occur as a

single vowel, viz. before a consonant in the word that follows immediately, or in isolation, but potentially it has a final -r, as was seen by Sweet, who transcribed such words with final -r in the glossary to his *Elementarbuch* sixty years ago. Although the practice seems evidently correct, it has been objected to, which is the reason why I make the additional remark that it is only the reality of this potential -r that explains its appearance when a word with an initial vowel follows immediately, and also its appearance in extra-close groups such as the Government of Indiar Act, I had no idea of it, on which the reader may consult *Introduction*?, § 106.

The diphthongs ai and ou occur as words in the ordinary sense, written eye, and the pronoun I, though this is not usually strong-stressed, and to owe (I owe you an apology). We may also add the interjection or sentence-word aye 'indeed', although it is hardly current in standard English now. If some reader should think of the strong-stressed form of the indefinite article, I must observe that it is hardly a real word, and if we count it as such it is at any rate rather one of those letter-words that are common in modern languages, as [ðɪ ænzæks] for the members of the Australian and New Zealand Army Corps in the first world-war, and Dutch Avro [aˈvro] (Algemene Vereniging Radio Omroep, i. e. General Association Radio Broadcast), Vara [vaˈra] (Vereniging van Arbeiders Radio Amateurs, i. e. Association of Labourers Radio Amateurs). The practice of letter-words seems to be infrequent in English, which generally enumerates the initial letters only, as in S. P. G. [es pi dʒi] for the Society for the Propagation of the Gospel.

Something more is to be said of the murmur-diphthongs that serve as words, such as air (or heir), ear, hour, and ire 'anger'; the nature of their potential -r has been discussed above. Apart from this, it can be observed that ire and hour, when spoken with a full ai and au followed by the murmur-vowel, are really dissyllabic, as alternatives to the pronunciation in one syllable with ɪ

or *u* as a glide. The last pronunciation can often be heard in churches in the reading of the collects, when power is hardly distinguishable, if at all, from *par*, the sound being [pəə] and hardly a glide between the two vowels, or none.

Our conclusion, therefore, is that English has properly speaking only a single word, *awe*, that belongs to this type; this is not the opinion of the writer of a treatise on the use of English sounds to whom I owe a debt for the provision of much of the material of this study: *A Phonological Analysis of Present-Day English* by B. Trnka, in the *Studies in English by Members of the University of Prague*, Volume V., 1935. Trnka gives ten words of the type discussed here, because he includes the words that I have mentioned above as belonging to the type in appearance only, viz. the words in potential *-r*; I shall make grateful use of Trnka's word-lists and find it a pleasant circumstance that I need not argue against him because he is concerned with the systematic arrangement of the material only, and leaves its interpretation to the reader. He has omitted the stems of one syllable that begin or end with the murmur-vowel, such as the definite and indefinite article (*the* before non-syllabic sounds, as in *the man*, and the indefinite article in *a man* and *an old man*). In a way this is to be defended, for they are hardly independent stems, but can only be treated as parts of word-groups. The same applies to such a preposition as *of* in noun groups, as in *a book of value*, also in the form of a single murmur-vowel, as in *men of the world*, which is transcribed by Sweet as *men ə ðə wəld* in the *Primer of Spoken English*, p. 94. But it does not apply to the word *of* in verb groups at the end of the sentence, where the vowel is [ɒ], though weak-stressed, as in *What are you thinking of?* It would be a mistake, of course, to pass these words over in silence, and they will be treated, however briefly, in chapter V., after the inflected, derived, and compounded words.

We next turn to the stems with initial *h*- and a final vowel or diphthong, such as *high*. They are generally looked upon as words beginning with a consonant, and the practice may be defended, but the character of the aspirate as part of the sound-system requires some comment. It is well-known that the aspirate is not a consonant in the physiological sense, because the sound that is produced in the larynx is not perceptibly modified in the supraglottal organs of speech. Of course, it is perfectly easy to decide what sort of vowel is to follow when we speak the aspirate in isolation, as any practical student of phonetics knows by experience; but in actual speech the aspirate in *high* does not perceptibly differ from the one in *hot*. As initial *h* is in no case a voiced sound, it cannot be classed as a vowel either. The remaining way out is to call it a glide; but this is defined by Sweet as a sound that is held during a time that is too short for the sound to be distinctly perceptible as such, and this definition does not apply to the initial aspirate, for it is quite clearly perceived as an independent sound, as the systems of writing of many languages, as well as our practical observation, show us. The result is that the aspirate is neither a vowel nor a consonant, and cannot be classed as a glide: it is unique. Some languages do not regard it as an independent sound: in Greek the aspirated beginning is not indicated by a letter but by a diacritic, in the same way as a diacritic is used for the clear beginning, which I take it is the meaning of the *spiritus lenis*. The practice of treating the aspirate as a consonant is based on the acoustic observation that it is a speech-noise, not a musical sound, and this practice need not be found fault with; but the preceding considerations are not therefore useless, because they show us the peculiar character of the sound, which must account for its peculiar position in the languages in which it occurs. For it occurs almost exclusively in strong-stressed syllables, less often in syllables that are quite weak; this is the reason why

English speakers find it difficult to pronounce it in such words as harangue, heroic, where it has been introduced by servile obedience to the spelling, but is contrary to the phonetic system of English, or indeed any language, for an aspirated beginning is a strong beginning; see *Introduction* ⁷, § 40. This way of looking upon the aspirate makes it possible to explain why the pronoun *he* is spoken with an aspirate when initial, even though it is not strong-stressed, but loses its aspirate in non-initial weak-stressed position, as any reader of Sweet's transcriptions can observe ¹). To turn to the stems of one syllable now, there are a great many of them with initial *h*- in English; of course, this does not prove its independent position in the English sound-system, but this character of the aspirate is proved by the existence of pairs of words that differ only in the absence or presence of initial *h*-, as well as by the experience that the absence of the aspirate in the words is immediately felt to be a mistake by speakers of educated English. It might be argued that in natural English uneducated speakers 'drop their aitches', and that the aspirate is the product of the schools; this is hardly correct, but even if it were, the fact remains that to a modern speaker the absence of the aspirate in such a word as *high*, and even in *humble*, where it was not generally used in the beginning of the nineteenth century by educated as well as uneducated speakers, is now felt to characterize the speaker as outside the educated class. Although lists of words that differ in one sound only are not generally given here, as superfluous for our purpose, it may be useful to enumerate the monosyllabic pairs of stems that differ only in the absence or presence of the initial aspirate; their number is not very large, but my list may not be complete.

haft	aft	heat	eat
hail	ail	heave	eave
hale	ale	hedge	edge

¹) On initial *h*- in weak syllables, see chapter V.

{hair	air, heir	hell	ell
{hare		helm	elm
{hall	all	{hew	{ewe
{haul		{hue	{you
harm	arm	hill	ill
{hart	art	hire	ire
{heart		hitch	itch
hash	ash	hoar	oar
{heal	eel	hod	odd
{heel		hold	old
hear	ear	howl	owl

The inclusion of hire and the rare word ire is made for convenience only; for the same reason I mention here the very small number of words of two syllables that are characterized by the presence or absence of the aspirate: halter and alter, harass and arras, harbour and arbour, harrow and arrow.

The words with the initial aspirate in English have been contrasted with those that have the non-aspirated beginning; the matter assumes a somewhat different aspect when the language that has pairs of this type uses the glottal stop, as is done in German. For in this case it might be asked whether the words with a glottal stop are really to be classed as words with an initial vowel. Physiologically speaking, this may be a difficult problem, but from a phonetic, i. e. a linguistic point of view the answer cannot be doubtful: the natural linguistic sense of speakers of German decides that such words as eins are spoken with an initial vowel, whatever speakers of other languages may choose to think, like those English children who asked their German-born teacher who enumerated the letters of the alphabet: 'Please, sir, why do you put something before a (i. e. ei)?' This is sufficient to account for the existence of pairs with initial h- and without in German as well as in English, and the same applies to Dutch, which does not use the initial glottal

stop to anything like the extent it is used in German, and practically has it only in extra-strong-stressed initial syllables, on which see *Introduction* ⁷, § 39.

The number of words of one syllable with an initial aspirate and a free final vowel is naturally small, for there are only three free vowels, if we exclude the full- and the half-diphthongs; and of the three combinations that are possible, those with the vowels of hard, heard, and hoard, the only word that can be said to exist is haw 'berry of the hawthorn', although it occurs in the plural only as far as I know. And on looking up the word in the New English Dictionary I find that all the quotations illustrate the plural haws, apart from the citations of the word from other dictionaries; the dictionaries also mention the word haw as a technical term of veterinary science. The diphthongs are used in hay, high, how, and to hoe; on the pronouns he and who, see chapter V. Apart from the words that have been mentioned, this type occurs with potential -r only, in hear and here, hare and hair, and the word to hire, which is sometimes dissyllabic, as has been explained above. There are no words of this type with the groups [auə, oiə]; indeed, there are no stems with final [oiə] at all. The reader will see that the number of words with an initial aspirate and final vowel or diphthong is inconsiderable, but there is a group of words that must be classed with them, although they are of a special character: the interjections. It has already been observed, on p. 11, that several of the free vowels and diphthongs are used in this function, but not the syllabic sounds of law, meet, and boy. The following are the interjections with an aspirate: ha, hey, ho, and hi; we do not find the free vowel as in law here any more than without the aspirate, but the vowels of stir and now, which are used as interjections, are never used with initial h-, and both types of interjections neglect the use of the syllabic sounds of meet, boot, and boy. The absence of [hə], whereas err- is used interjectionally, seems to be explained by

the consideration that *err-* is used interjectionally with weak stress, for the interjections with initial *h-* naturally require, and express, a certain amount of energy. The reason why the vowel (or diphthong) of *meet* is never used, whether with an aspirate or without, may be that it is a vowel with very little carrying power (sonority), but this cannot be said of the syllabic sound of *law*, and still less of those of *cow* and *boy*. The absence of [hau] and [huw] as interjections, however, is easily accounted for when we consider that *how* and interrogative *who* are independent words, and, indeed, something in the nature of interjections in that character. The diphthong *oi* is not used without the aspirate; the sound plays a very subordinate part in the English sound-system, and seems to be favoured in an interjectional function, as is suggested by the nautical interjections or signals *hoy* and *ahoy*, and by the repetition-group *hoity-toity*, and the word *hobbledehoy*. Some readers may care to have a printed example of some of the interjections that are not so common as most, which must excuse the quotations that follow. *Hey* occurs in the *Penguin Selected Short Stories* p. 69, and also in *Priestley's Good Companions Book III.*, ch. 4, p. 571, and *ho*, written *whoa*, is to be found in the *Selected Stories* just mentioned on p. 30. The others are too frequent in print to require any illustration. It has already been mentioned in passing that the use of the initial aspirate is evidently the effect of the greater energy of mind, which also explains the difference of meaning when compared with those that have a clear beginning.

The two types of monosyllabic stems that have been treated, those consisting of a single syllabic sound and those with an aspirate before them, form a very small number when compared with the words that have at least one genuine consonant, whether it opens or ends the word. I start with the words that have an initial consonant; the only one with a free vowel in the narrow sense of the word (i. e. not including any kind of diphthong)

are *pa* and *ma*, and these are hardly words in the full sense, for they are of the nursery-type, and related to the interjections, but there are more that end in the vowel of *law*: *paw*, *caw*, *thaw*, *saw* (the substantive or verb stem, for the inflected forms are dealt with separately, in chapter IV.), *maw*, *gnaw*, *raw*, and *law*. It will be noticed that all these words in *-aw* are of every-day occurrence. Of the words with final [i] and [u], or [ij, uw], as explained before, I know the following: *fee*, *pea*, *bee*, *tea*, *key*, *see*, *knee*, *lee*, perhaps *wee*, which is really current, although its Scotch origin is not yet forgotten. On the pronouns *he*, *me*, and *she*, I refer to Chapter V. on Form-words. Final [u] or [uw] occurs in *too*, *do*, *to rue*, *ewe*, *shoe*, *loo* (card-game), also the literary *to woo*, and the imitative words *boo*, *to moo*, and *shoo*. The pronoun *you* will be dealt with in the chapter on the form-words. The interjectional verb *to pooh-pooh* may also be mentioned here. The half-diphthong [eɪ] is found in *pay*, *bay*, *day*, *gay*, *say*, *may* (and *May*), *to neigh*, *ray*, *lay* (the substantive or verb stem, not the preterite), *way*, *to weigh*, to which it is doubtful whether we ought to add the poetical word *fay* 'fairy' and the Scotch word *fey*. The pronoun *they* is intentionally omitted in the list, for it is essentially anaphoric and weak-stressed, and will find its place in chapter V. on the form-words, together with *he*, *she*, and *we* (perhaps not *me*). The list for [oʊ] is also small: *bow*, *toe*, *doe*, and *dough*, *to go*, *to sow* and *to sew*, *to show*, *to mow*, *no*, *to row*, *low*, and the two literary words *foe* and *woe*. We also omit *though*, which might seem to belong to this group; it is generally weak-stressed, whether used conjunctionally in a sub-clause, or as an adverbial conjunction, as an appended word to a sentence, as in: *I don't agree with that view, though*. There are a number of words with final [aɪ]: *to vie* (not in common use), *pie*, *buy*, *thigh*, *to tie*, *a tie*, *to die*, and *to dye*, *guy* and *Guy*, *to sigh*, *shy*, *wry* and *rye*, *to lie* (two meanings), and *why*, also the interjection *fie*. The pronominal *my* and

the purely literary *thy* need no comment here. The full diphthong [au] occurs finally in *to bow, cow, sow, now, row*, and the more or less literary verb *to vow*. Final [or] occurs in three words only, and a fourth of a purely technical kind: *toy, coy, boy*, and the naval word *buoy*. The position of [or] in the English sound-system may deserve some closer inspection; it is infrequent, and does not occur before final stops at all, nor before final nasals, nor before final opens, apart from *-z* in *noise*, and *-s* in *voice*, and the historical word *coif*¹⁾. To return to the point we are dealing with here, I remind the reader that some observations have already been made on final murmur-diphthongs, whether with final *-r* or not, on p. 4f., so that I need only mention the preposition *for*, but as one of the words that will require consideration in chapter V.

The preceding enumeration has shown that the number of words with a single initial consonant and a final vowel or diphthong is not inconsiderable. The opposite type: initial vowel or diphthong and final single consonant, is far less frequent; with the help of the dictionary and Trnka's lists I enumerate the following: *inn, ill; ebb, edge, egg, ell; add, ass, ash; odd; to eat, to eke* (hardly used at all, except in the group *to eke out*, on which see chapter IV.), *ease, each, eel; to ooze; ape, aid, ache, ace, aim, to ail; oath, oats, oak, to own* and the adjective *own*, and the literary word *ode*; for [ai] the noun *aisle* and the literary word *isle*, apart from word-groups, when it is quite usual, as in the *Isle of Wight*, with the strongest stress on the proper name; *out, owl; art, (Noah's) ark, arm; oil; earth, earn, earl; orb, ought, awl and awn* (more usual in *awning*). I do not mention the form-words if, it, in, of, on, at, am, as, the indefinite article *an, up, us*, except to remind the reader that they will be treated in chapter V. It may be observed that the checked vowel of *to push* never occurs at the beginning of words; in my *Introduction*⁷, p. 61, I have pointed out that this vowel

¹⁾ See chapter VII.

is used in a small number of words only, and before a single consonant, never before a consonant-group, in contrast to all the other checked English vowels. The question might be put whether the vowel is to be counted an English phoneme, for it occurs exclusively between consonants, and between some consonants only. It might be suggested that it is a variant of the vowel in *hot*, or in *but*; the first is suggested by the imitative pair to *coddle* and to *cuddle*, the second by the fact that it occurs before some consonants only, where it seems to be a modification of [ʌ] as a result of the adaptation to the consonant. For [ʊ] occurs chiefly after lip-consonants, in words with final -l: *bull*, *pull*, *wool*, etc., and before the sibilants: *push*, *bosom*, *push*; *worsted* and in *butcher*. In the following words no lip-consonant precedes: *could*, *should*, *good*, *hood*, *stood*, *soot*, *sugar*, *cuckoo* (an imitative word), and the words with final -k: *book*, etc. In the last group the checked [ʊ] might be looked upon as a variation of the half-diphthong as in *food*. We also find [ʊ] in *woman*, but it never occurs before -n or -ŋ, nor before -r, -b, -p, -f, -v, -th (hard or soft), nor before final -z and final -3 (but it does occur before medial sibilants, as in *bushel*, *cushion*, *bosom*, and *worsted*). There are few cases of pairs of words differing in their vowel only, one of which has [ʊ] and the other [ʌ]: I mention the pairs *could*—*cud*, *book*—*buck*, *look*—*luck*, *shook*—*shuck*, *took*—*tuck*, *rook*—*ruck*, *stood*—*stud*; to these may perhaps be added the verb *to put*, which is spoken with the vowel of *shut* in the game of golf. Neither [ʊ] nor [ʌ] occur initially in monosyllabic stems, and the question must be asked why some other vowels too are rare initially. The vowels that are at all frequent initially in English are those of *hat* and *net*, as the reader can easily verify by consulting the dictionary. And I have shown, in *Taal en Leven* II., p. 66 f., that in Dutch and German, too, the initial vowel *a* is greatly preponderant, and that *e* comes next, whereas the other vowels lag far behind. The same can be observed in

French, so that there seems little doubt that some phonetic cause is at work here, although I cannot explain the facts. Just as there are no words in English that begin with the vowels of bull and shut, there are none in Dutch with the initial front-rounded [œ], apart from the loanword *ulster*, whereas words with [u] (written *oe* in Dutch) are extremely rare: *oefenen* 'to exercise', *oester* 'oyster', and *oever* 'river bank', the latter not in common use, but something of a term limited to geographical discussion, at any rate of a technical character. It is clear that physiological and physical students have a task cut out for them here, for there can be little doubt that the problems must be tackled from that side. It has already been observed above (p. 20) that *or* is a rare sound in English, but other sounds also require consideration from that point of view; thus, it may be of importance to note that the half-diphthong [uw] never occurs before the back stops, unless we consider *snook* and *spook*, which are mentioned as words with the diphthong in the Concise Oxford Dictionary, and that the diphthong [au] does not occur before -*m*. Another point will have to be considered, too, and it is one that has never been raised up till now, as far as I know: proper names that begin with a vowel are often provided with a nasal in nursery-pronunciation, as *Nann* for *Ann*, *Ned* for *Edward*, *Noll* for *Oliver*; on this point some remarks will be made in the concluding chapter.

The number of stems with an initial consonant-group followed by a final vowel or diphthong is considerably larger, although the number of words in a free vowel in the narrower sense is small here as well as in the preceding group: *draw*, *flaw*, *claw*, *jaw*; we have potential -*r* in *spar*, *star*, and *scar*, and may perhaps add *tsar*, although the word is only used as a historical term now; also with [ɜ]: *spur*, *stir*, *slur*, *blur*. The half-diphthongs [ij, uw] supply the following cases: *free*, *three*, *tree*, *flea*, *plea*, and the literary word *to flee*, also the literary *glee*; *brew*, *true*, *crew*, *blue*, *clue*, *glue*, *chew*, *Jew*, *pew*, *dew* and *due*,

few, view, sue, mew, new, and lieu. The last are somewhat doubtful because a word like pew, and all the words that follow after it, may be said to contain a rising diphthong; this seems an undesirable interpretation to the present writer ¹⁾. Here follows the list for the half-diphthongs [ei, ou]: stay, sway, slay, fray, prey, pray, tray, dray, grey or gray, to flay, to play, clay; snow, slow, throw, to crow, to grow, to flow, glow, and to blow. The full diphthongs occur finally in spy, sty, sky, sly, to fry, to pry, to try, dry, to cry, to fly and the substantive fly, to plie; prow, brow, and plough; and the two words joy and cloy, unless we include troy, which is hardly intelligible except in the group troy weight.

A triple consonant-group with a final vowel or diphthong occurs in a smaller number of words: straw, squaw; spree; spew, strew, screw, stew, skew; spray, stray, splay. Note that all these groups begin with s and a stop. There are also a few words with an initial consonant-group (double or triple) and a final murmur-diphthong that represents a potential -r: pure and similar words with -j- as their second member, on which see p. 42 below; also: spear, steer, sphere, sneer, smear, clear; to spare, etc.; skewer and square. Some might wish to include the words like spire, choir, friar, prior, briar; scower, flower, and glower, but I think it more correct to reckon these as dissyllabic words. The imitative character of final [ɛə] is evident in the following quotation: Outside it was all blare and glare and publicity... Inside it was all hushed and private. V. Sackville-West, *All Passion Spent*. Penguin, p. 34.

It has been shown that stems of one syllable that have an initial vowel and a single final consonant are few in number; the same applies to the words of this type with

¹⁾ Such forms as the preterites drew, grew, threw, and blew are not included, for they are to be counted as inflectional forms. The stems are draw, grow, throw, and blow, for these are the only forms that take suffixes.

a final consonant group, which it is possible to enumerate: imp, inch, ink, itch, possibly ilk, although it is only used in the group of *that ilk*; end, etch, elk, elm, perhaps also elf, though it is rare now, and else, which occurs chiefly in groups with a pronoun (somebody else), but also as a conjunction; asp, apse, axe, apt, act, ant, perhaps Alp, although it is hardly a common noun (it is occasionally so used by Norman Douglas, but that may be due to his familiarity with German); urge; east; old; to oust, ounce; to ask, and aunt. There are none with a final triple group. It is of special importance to note the words with a final -t and -s, for these may compete with inflected words, such as axe and acts, but this seems to be the only case in the words with an initial vowel, whereas it occurs more frequently in the words with initial consonants, as we shall see below, and as will be discussed in chapter IV. The enumeration in this paragraph has shown that the words with an initial vowel or diphthong form an insignificant minority when compared with the monosyllabic stems with a final syllabic sound, but at the same time that both groups occupy a very modest place in the whole of the English vocabulary.

In Trnka's book we find complete lists of words of one and two syllables arranged according as they begin with the different vowels or diphthongs, or end with them, of the initial and final consonants and consonant-groups, and of medial consonants. And the words of each type are not only enumerated but also counted, and the percentages of each type are calculated. The book is a feast for the lover of numbers and statistics, but I do not see that our understanding of the structure of English words is much advanced by it. I shall only mention the percentages that Trnka has calculated for the type of words consisting of a vowel or diphthong only, which is 0'31; words with a syllabic beginning and a final consonant or consonant-group: 2'92; initial consonant or consonant-group and final syllabic sound: 9'84. The words with a non-syllabic

beginning and end reach as high a percentage as 87. We see that the type with a syllabic end is very little used, and that the words with a syllabic beginning are still fewer in number, whereas the words that consist of a syllabic sound only hardly count at all. But Trnka's statistics cannot be accepted without any corrections, apart from mistakes that are inevitable in this sort of work—which I could illustrate by examples, but which I consider it of no importance to pay attention to—for in the words with a syllabic ending he includes those with potential -r, and it is clear that they must at any rate be kept apart as a separate group. The percentages 0'31 and 9'84, small as they are, must consequently be lowered considerably; it would be possible, with the help of Trnka's own lists, to correct the percentages, but it hardly seems worth while. The absolute number of words that consist of a syllabic sound only is estimated at ten by Trnka, of those with a syllabic final sound he counts 371; I have already pointed out that the numbers are too high because he includes the words with potential -r. The number of words with an initial syllabic sound is given as 75.

The time has now come to speak of the great majority of English words of one syllable: those with a consonantal beginning and end, and a syllabic centre. We shall naturally treat separately of initial or final single consonants and consonant-groups. With regard to the single consonants the first question that must be answered is: which of them occur both initially and finally, and which occur in one of these positions only. Most of them occur in any position, initially, finally (and medially); it would be waste of time to supply tables of words to prove this, and I shall speak of those consonants only that do not occur in all three positions, or are in limited use with regard to the syllabic sound or in any position or positions. The first of these is the velar nasal, which occurs finally, as in thing, and in the final group with -k, as in think, where it may be looked upon as an adaptation to the following back-

consonant. It might be said that the velar nasal is an individual sound in English, a 'phoneme', as some love to term it, in its final position, and that it is of a secondary character in think, like the lip-f of emphasis. Of course, we also find it medially, as in singer, and a few words of that type, but these are derivatives or inflectional forms, and we are here dealing with the monosyllabic stems only. There is one word with medial ŋ that may look like a derivative: dinghy [dɪŋɡɪ], but this loan-word is perfectly parallel to finger, and does not change the position of the sound. On the contrary, it might be doubted whether the velar nasal is an independent sound even when used at the end of stems. In the first place, it is of very limited occurrence: it never occurs after free vowels or diphthongs, and we find it after some of the checked vowels only. It never occurs in syllables with the vowels of wet and put, but it must be remembered that the latter vowel is never followed by any of the other nasals either. On the other hand, the vowel of hot is often found before a velar nasal, as in song, long, wrong, thong, strong, tongs, prong and before final -k in conch, and the imitative word to honk, which may be illustrated by a quotation: Far away a car honked. Gilbert Frankau, *Martin Make-Believe*, ch. 34, p. 282. Of course, an imitative word is instructive because it shows a form that is the result of linguistic forces that are at work at the present day. The frequency of checked o before the velar nasal is in strong contrast to its rare use before -n; in this position it occurs only in to con, to don, the substantive don in academic use, swan, the proper name John, and the literary adjective wan. Before -m the vowel is even rarer; it occurs exclusively in one common word: bomb, and in the proper name Tom ¹⁾).

¹⁾ The peculiar character of bomb as a loanword, and of Tom as a shortening of the Greek name need not be pointed out to the student of the history of English. But the observation as to the rare occurrence of the vowel of hot before -m, its non-existence in living English, practically speaking, may throw a new light on the history of the preterite swam, which is always explained as an ana-

Perhaps the prefix non-might have been included in the list of words with final -n, but in any case there is a clear contrast between the velar nasal and the others with respect to this vowel. After the other checked vowels final -ŋ is pretty common, but there are not many pairs of words of one syllable that differ in the last nasal only, one being the gum-nasal, the other the velar nasal, such as ban—bang, clan—clang, tan—tang, fan—fang, pan—pang, kin—king, sin—sing, win—wing, thin—thing, run—rung, ton—tongue, dun—dung, bun—bung. I cannot be certain that the enumeration is exhaustive, but it has already been shown by experience that it is not unnecessary again to remind the reader that such pairs as ran and rang are not to the point because we are dealing with stems only; it is true that ran is not an inflectional form of run in the usual sense, but the stems of the present of verbs are the only ones that take suffixes, and must be considered as stems in the full sense of the word. The number of pairs that differ in the final nasal only is clearly small, but it must serve as a basis for treating the velar nasal as an independent English sound; whether we choose to call it a phoneme or not, is of no importance; the important fact is that it has little significance in the building up of English words. In this connection it seems of some use to point out, as I have already done in the *Introduction*?, p. 151, that the French word *meringue*, with a nasal vowel and a final back stop, has been borrowed in English with the checked vowel of *hat* and the velar nasal, so that the final stop of the word in French has been dropped: an indication that the final group of velar nasal and soft back stop is contrary to the English sound-system. It might be argued, consequently, that final -ŋ is in English

logical formation on the model of 'similar' preterites, began being the common example. Can it be that the preceding w- did not round the following vowel, contrary to what we find in other words (*what*, *watch*, etc.), because the resulting syllable would have been contrary to the English sound-system? A word in daily use like *swam* would not so easily ignore this as a foreign and technical word like *bomb*.

a modification of the group -ŋg, which occurs in its unmodified form in the middle of words only, as in *finger*.

A word must also be said of the side-consonants, all of them written *l*, although the difference between final -*l* and final -*l* with a consonant is marked enough to require special mention in handbooks for practical students of English. And this many-sidedness of the *l* also shows itself in the use of the checked vowels before them: in monosyllabic stems we find words of the types *tell*, *till*, *dull*, and *full* in pretty large numbers, but there are hardly any words with the vowels of *fat* and *hot*. The only instance for the first vowel is in the slang word *pal* 'friend', and for the vowel of *hot* the harvest is also small: the nursery-word *doll*, the learned words *to extol*, and *volt* and the imitative word *to loll*. On this point the reader may consult the *Introduction* ⁷, § 170, where it is shown that the difference between the words with final -*l* as against those with medial -*l* is the result of the difference of length between final and medial consonants. The form *doll* is a back-formation, the checked vowel of *volt* and *extol*, as well as of *pal*, is due to their character of words that have been borrowed with their foreign pronunciation, and to *loлл* is an imitative word. As to the proper names *Moll*, *Doll*, *Poll*, *Noll*, and the common noun *doll*, as well as the proper names *Hal* (for *Harry*) and *Sal* (for *Sally* from *Sarah*), I may refer to the study on diminutives in the *Mededelingen van de Ndl. Akademie van Wetenschappen*, 1942.

It is usual to look upon the semivowels as part of the English consonant-system; it must be observed, however, that *j* and *w* occur before vowels only, in accordance with their character, so that they must be treated separately from the consonants proper, i. e. the stops and the opens. The stops and opens are said to be either breathed or voiced in English, both at the beginning and at the end of words, but something may be added to that, at least for the benefit of those who are not familiar with the de-

tails, i. e. the essentials, of phonetics. In the first place it should be considered that the terms *breathed* and *voiced* with regard to stops are pretty meaningless in themselves; *voiceless* and *breathed* when applied to stops really mean different things according as they refer to initial or to final consonants. Indeed, it may be said that *voiced* final consonants do not exist in English, in spite of our hand-books: what are called *voiced* final stops are not completely *voiced* sounds, although they are still *less* *breathed*. All this must be said because experience teaches that students of language are not always acquainted with the rudiments of real phonetics, because they have not taken to heart the warning of Sievers, that no study of phonetics can be real that is not practical, i. e. founded upon the personal experiences of the student, and these experiences must be based upon the examination of the only speech-sounds he may come to understand thoroughly, viz. his own. Instead of the learned modern terms *voiced* and *breathed* it may be more instructive to use the old-established ones of *hard* and *soft*: they are not only old but also well-founded, and quite as scientific as the modern ones, and more useful for our present purpose. Thus we can state that English stops may be either *hard* or *soft*, both finally and initially. The opens are not so soon disposed of; one of them, indeed, hardly occurs initially nor finally, viz. *ʒ*, for it is never found at the beginning of words, and occurs in two monosyllabic stems only in a final position, *rouge* and *tige*, words that most readers will have to look up in the dictionary, especially the latter. The other two soft opens, *[ð]* and *[z]*, have a weak position initially, although there are a not inconsiderable number of words that open with soft *th*-, such as *this*, *that*, *then*, etc. Their enumeration is not necessary here, for every schoolboy knows them, in Macaulay's phrase, and if any reader should not be able to enumerate them, or should wish to see the complete list, he may refer to my *Introduction* ⁷, p. 162. It is pointed

out there that the words with soft initial th- are all weak-stressed words, and form-words too, related to the pronouns; they will be dealt with in the chapter on form-words. Soft initial th-, consequently, although it occurs in English, does so in a limited group of words only, and words of a special character; still, it would seem impossible to me to deny that English has the sound at the beginning of words, whether it deserves the glorious title of phoneme or not. The soft initial sibilant z- is also of infrequent occurrence, as a glance at the dictionary will show any reader who should not have observed it before. The lip-teeth v- is the only one that occurs pretty generally, even though it cannot compete in the number of words with the hard initial f-; we find it in vague, vain, valve, vamp, van, vane, veal, etc., mostly words that are not in very common use, but the sound occurs at any rate, and in some words that are really in daily use. We may conclude that the soft open consonants are in a weak position initially, and that v- is the only one that really counts for something in the sound-system as a whole. The reader may compare the soft initial opens in Dutch; they have a peculiar position, too, and are only partly voiced, on which the reader may consult *Introduction* ⁷, p. 19 and 67, with a reference to the exercises that are necessary to teach the English initial opens to Dutch pupils. The difference between the hard and the soft initial opens is so inconsiderable in Dutch that there is often a good deal of hesitation among Dutch speakers, especially in the case of the less frequent words.

Some remarks, too, are necessary on the English final soft opens, although they are by no means uncommon, that is after free vowels: breathe, leave, seize, etc. But in syllables with checked contact the facts are otherwise; some of the checked vowels never occur before voiced final opens in stems of one syllable at all, and the others are only used in a comparatively insignificant number of words. To begin with the first group; the vowels of wet

and hat never occur before final voiced opens at all, at least in words in common use, any more than the vowel of pull, which has already been dealt with above (p. 21). The vowels of hit and shut occur in an extremely small number of words of the ordinary type: give, live, sieve; love, shove, buzz (but this is rather of the onomatopoeic type that is going to be mentioned below). It is evident that checked contact combined with final open consonants does not often occur, and it is natural to look for a reason for this. The fact is not really changed by the existence of a few words of the type that can be adduced: to fizz, fuzz, to quiz, and to whizz; nor by the loanwords fez and jazz, and the verb to rev, an abbreviation of revolve, and used by motorists. I may serve some readers by a quotation for fuzz and rev: I am a great believer in sharp outline. I dislike a fuzz. Mrs. Sackville-West, *All Passion Spent*, Penguin, p. 91.—Revving up to pass one of those lorries, Sylvia was again aware of the fanatical control Martin must be exercising over himself. Gilbert Frankau, *Martin Make-Believe IX.*, ch. 48, p. 429.—It is hardly necessary to discuss these words, for any reader will immediately see that they do not count in a estimate of the phonetic structure of living English, however interesting they may be from the standpoint of the student of word-formation. The facts observed concerning the final soft consonants become all the more significant when we consider that all the final hard opens, except -f, are freely used in syllables with close contact: stiff, pith, cough, etc.; breath, cloth, etc.; mass 'service', mess, moss, puss; cash, fresh, wish, bush. It is to be noted that checked e (as in breath) never occurs before -f, checked æ (of hat) is absent before final -f and -th, u (of bush) before -f and -th, ʌ (of stuff) before -th. As to -f, it is noteworthy that it occurs in syllables with æ, as in cash, etc., whereas the vowel is generally free before other final opens, as in glass, bath, etc.; but -f does not occur in syllables with checked ɒ and ʌ (as in shut), apart from the interjectional bosh and hush.

[ʃ] also greatly differs from the other sibilants in that it is limited in final use to two free vowels, as in *harsh*, *marsh*, and *leash*, and in the dissyllabic word *pastiche*; as far as I have observed there are no other words with these vowels, and the number of words with final -ʃ is consequently almost limited to the syllables with some only of the checked vowels.

The reader will have seen that far more questions have been asked or suggested here than have yet been answered; some, indeed, will come up for discussion in the final chapter, but is not the ability to put questions a sign of the progress of our knowledge? I will only add that I have not forgotten weak-stressed words like *is* and *has*, *was*, all of them with final soft opens; they will be treated in chapter V. on form-words. We must now turn to another part of the task we have undertaken: the words with consonant-groups at the beginning or at the end, or both. In dealing with these I shall make use of what I had already written on the subject in my *Introduction* ⁷, p. 67 ff., and the word-lists of Trnka that I had not used for my earlier book because it had not occurred to me. We shall start with the double groups, consisting of stops and opens with the vowellikes. Stops with *l* and *r* are very common in English, as in Dutch and German, and probably in most languages that have consonant-groups at all. Of course, the order is reversed finally (*please* and *help*); on this point I need not make any comment, and it will hardly be necessary to refer the reader to *Introduction* ⁷, § 44, or to the *Handbook* ⁴, § 150 ff. Nor does it need any explanation that there are no groups with final -*r* in English.

For the initial groups of consonants and vowellikes it is superfluous to give many examples, because the reader need only look up the words in the dictionary. I may observe perhaps that it seems to me to be in the interest of the progress of phonetic studies that the student should examine languages that he knows somewhat intimately. In

reviewing Trubetzkoy's *Grundzüge der Phonologie in Taal en Leven* IV., p. 12 ff., Preusler has pointed out that many languages are dealt with in the book that hardly any reader can be expected to know, languages, too, that nobody knows minutely, because they have not been sufficiently studied; this may be excusable in a preliminary survey, but the methods of such a survey must differ from those of a systematic exploration. I begin the initial consonant-groups with the combinations of stops and liquids (l and r), for there are no groups of stops with nasals in English; it may be noted that such groups exist in Dutch, although they are rare, being limited to the group kn- as in knie, knippen, and to similar combinations in word-groups, as in 't nieuwe ¹⁾). The hard opens are grouped initially with l and the nasals m and n, as in sniff, smack, sling. The existing combinations with l and r appear in the following table.

Stops	Opens
pl-, kl-, —	fl-, sl-, —, —
bl-, gl-, —	—, —, —, —
pr-, kr-, tr-	fr-, —, thr-, shr-
br-, gr-, dr-	—, —, —, —

There are no groups of t and d with l initially, which seems natural enough, for the sounds are produced in the same place. But dialectally, perhaps also among educated speakers that are influenced by their local speech, the groups tl- and dl- occur; not as independent groups, however, but as substitutes, or alternatives, to the groups with a back stop: kl- and gl-. They are consequently of no importance in the structure of standard English, for the number of distinct groups remains the same. The table shows that groups of l and r with open consonants are rare, and exclusively limited to the hard opens:

¹⁾ The student of English who does not fear to widen the range of his study, and understands that he should have some knowledge of the other Germanic languages, will find an account of the Dutch sounds, on similar lines to those of English in this book, in *Taal en Leven*, II., III. and IV. The treatment is briefer than here.

another proof of the weak position of the initial soft opens that was discussed above (p. 29 f.). Hard sh- and th- do not occur with l at the beginning of words, and hard s is never grouped with r, the triple group str- being used instead, as in many other languages. The absence of the groups of opens with l and r, especially those with the soft opens, is all the more noteworthy when we consider that the other groups are much used. Words with the initial groups enumerated in the table above are extremely common when the word ends in a vowel or a single consonant, as in please, clean, black, glove, praise, cry, tray, broad, etc. Words of this type with a final consonant group are not so common, but still pretty numerous; it hardly seems necessary to enumerate them here. But it is of some importance to examine what kinds of groups occur finally in this type of words; it appears that they are the same as occur in words with a single initial consonant or an initial vowel, though some groups cannot be instanced in words that begin with a vowel, probably because the number of words with an initial vowel is so small. With regard to the groups of opens with m at the beginning of words a remark seems in place; when we examine them they all appear to be of a peculiar type, more or less clearly expressive of affective ideas: to smack, to smash, to smatter, smithers (into smithereens), smudge, smutch, smug. Of course, the same might be said of to sniff, and perhaps that is correct, too; but I hardly think it likely that the meaning of the words with initial sm- is an 'accident', whatever that word may mean ¹⁾).

The final groups of l with a following hard stop are frequent; we find the groups -lp, -lk, and -lt in a great many words: help, silk, melt, etc. Of the soft stops we find the group -ld only: gold. Groups of l with final hard opens occur, at least -lf, -ls and -lth, as in shelf,

¹⁾ A good deal of information on imitative words in English will be found in Koziol's *Handbuch der englischen Wortbildungslehre*, Heidelberg 1937. The book also supplies a bibliography of the subject.

false, pulse, health; words in -lth are a small group, and apart from that, we might look upon health and wealth and stealth as hardly certain stems, for they are more or less clearly connected with heal, weal, and steal, even though -th is not a productive suffix; but growth also exists, and there are such words as tilth, which is perhaps to be looked upon as dialectal, and of little importance, and this applies with even greater force to gloomth, greenth, illth, blowth, on which the reader may consult the New English Dictionary. The groups of l with soft final opens are not used except the group -lv, which occurs in shelve, valve, and solve, the only ones that I can find, for to delve, though it may be found in the dictionaries, is not used in actual speech. The only groups of l with final opens that are not limited to a small number of words are those with a hard or a soft broad sibilant, as in belch, filch, bilge, bulge, and a few others, like Welsh, although its stem-character may be doubtful by its association with Wales. I leave undiscussed the question whether these words have final -ltʃ or -lj. There are a very small number of words in l with a nasal: elm, film, realm; and the unique triple final group in whilst, although it is of course associated with while. Groups of l with other nasals are not used at all. It is clear that final groups of l with a consonant or vowellike are almost limited to those with final stops.

Final groups with a nasal for their first member are frequent when n is the first sound, especially with the homorganic stops: -nt and -nd, but we also find the combinations -ns and -nf, but hardly any with a final soft sibilant, and only one with final hard -th. I first enumerate the words with an initial l-group and the nasal combinations mentioned: plant, blent, glint, flint, blunt, flaunt, flounce, slant; bland, blend, blond, blind, gland; glance. The only word of this type in -nz is to cleanse; there are a few more in -nf: clinch, blench, blanch; two with final -nʒ: plunge, and flange. The final group -np occurs in month and plinth only. The lists are pretty com-

plete, although I may have overlooked some of the rarer words; the reader will notice, however, that many of the words mentioned are also rarely used.

Words with an r in the initial group are more numerous, though even here the number is not large: print, brunt, grant, grunt; trend, brand, grand, grind, ground, friend; with sibilants: prince, to prance, trance; and the unique bronze; with the broad sibilant: trench, crunch, branch, drench, French; cringe, fringe, and no others. Of course, there is something to be observed about these words, especially the rare or unique cases; but it seems the best plan to consider them together with the words that have the same final groups but a single initial consonant, as well as the small group with an initial vowel, though these do not really change the fact that the final groups dealt with here are little used. For the present I prefer to abstain from any further discussion, because we are here dealing with the question what final groups with vowellikes occur in words that begin with similar groups. Beside the groups with n there are few with the other nasals; the only ones are combinations with the homorganic stops, as -mp and -ŋk: plump and plank; clamp, clump, clink, clank; blink, blank. There are none with gl-, but fl- occurs in flank, and sl- in slump, slink, and slunk. Words that begin with an initial r-group may have final -mp and -ŋk: crimp, crank, prink, prank; tramp, trump, and trunk; cramp and crump, crank; brink; drink; none with gr-; frump and frank; shrimp, shrunk. The only final group that is not homorganic is -ms in glimpse, but there is no other case. We may just mention the really homorganic final groups of gumph¹⁾, nymph and lymph, but these words count for little, although this may be said of many of the others that have been enumerated: the number of words of this type in daily use is very small.

¹⁾ It is not in the dictionaries, so that a quotation may be welcome: But I never know whether to believe Clare; she's such a gumph. Rose Macaulay, *Potterism* VI. ch. 1. 3 p. 209.

Perhaps we may also mention the interjection humph, which really means a syllable with syllabic m; on the other interjections with initial h-, see p. 17 ff.

The words that open with an l-group never have an l at the end, and even the type broil is rare; by the side of the groups with nasals that have been dealt with pretty completely, we also find the final groups with s first: -sp, -st, -sk, and the groups -kt and -ft. The number of words of these types is comparatively small so that an enumeration is quite possible. I take the groups with s first, arranged according to the initial consonant group: clasp, blast, flask, priest, tryst (literary only), trust, crisp, crest, crust, brisk, brusque, breast, grisp, grasp; frost, frowst, frisk, thrust. Final -kt and -ft occur in some words beginning with an r-group, not in such as open with an l-group: tract, crypt, croft, craft, draft and draught, graft. There are three words of this type in -ks: flax, phlox, and flux.

It may have struck the reader that there are few words with initial p-groups; anyone who is familiar with the historic study of Indogermanic languages knows that the hard lip-stop is infrequent in the Germanic languages, apart from any grouping with other consonants. The conclusion has been drawn that there were few words with initial b- in primitive Indogermanic, which is perfectly acceptable, but naturally does not explain anything. It is more significant that the modern English words with initial pl- or bl- and br- rarely have a final group with -m-: the only case that I have observed is plump, and this conforms with the view that it is of an imitative character. Initial thr- and shr- occur, but not the similar groups with an l; the cause is probably the nature of the side-l, which is too closely associated in its place of articulation with these opens. Apart from this, the group thl is hardly used at all in stems, unless in loanwords; of the latter type is Dolgethly, a place-name in Wales, and an attempt by English speakers to imitate the breathed -l- of Welsh.

With regard to the final consonant groups it has already been pointed out that *n* is the only nasal that is combined with consonants that are formed in a different place, so that we have not only stems in *-nt*, *-nd*, *-ns*, and *-nz* (if very rarely), but also *-nf* and *-nʒ*: *wind*, *bend*, *hint*, *pint*, *wince*; *finch*, *cringe*. Final *-nz* occurs in the technical word *lens*, beside the two that have been mentioned above: *cleanse* and *bronze*; I do not include *alms* and *means*, for reasons which the reader will understand without any comment, but the value of this consideration for the study of English morphology has been pointed out in my *English Grammar* ⁶, § 258. An enumeration of the words with the other *n*-groups seems unnecessary, but two are omitted by Trnka, and may therefore be mentioned here: the proper name *Stonehenge*, and the slang word *binge*, which the reader may not know, at least it is not in the *Concise Oxford Dictionary*, and I first met with it in Frankau's novel *Martin Make-Believe*, a quotation from which may be welcome to some readers: ... the little knot of gunners to who he was still holding forth (at an evening-party) about «that binge» we had in Poperinghe—or was it Béthune? Damned if I remember. Ch. 19, p. 146. The word means 'drinking-party'.—The transcription of *glimpse* as *glims* by Sweet might induce us to state the final group *-ms*, and this is perfectly defensible; but it must be remembered that such forms as *glimpses* or *glimpsing* would be spoken with *-ps-*, which is parallel to the twofold transcription of *jumped* mentioned on the first page. We must also consider, however, that the words of the type *fringe* end in two consonants finally but have a *-d-* in disyllabic forms as well as the words like *glimpses* have a *-p-*. We see that it is not always possible to decide authoritatively whether a word has a double or a triple final consonant group. We may also remind the reader of what has been remarked about final *-ŋ* on p. 25 f. The form *glimpses* may also be compared with empty. The isolated words *gumph*, *nymph* and *lymph*

have already been mentioned on p. 36; they are of no importance in the study of the English sound-system. The initial groups *sm-* and *sn-* have no corresponding parallels at the end of monosyllabic words with a soft sibilant, for words like *chasm* and *schism* are of two syllables, which is evidently due to the high degree of sonority of soft *z*, which makes a rise of sonority so evident that the hearer interprets it as a new syllable. The absence of the broad sibilant in the groups with *m* and *n*, i. e. the absence of *shm-* and *shn-*, is to be accounted for in a similar way.

The data supplied in the preceding pages naturally require a good deal of comment when we wish to do more than state facts, which are at best the material for the student; but in this preliminary study I do not enter into these questions, so as to avoid bewildering the reader by the mass of detail, and the digressions that would necessarily be made. For this reason I will now deal with the initial groups of consonants with the semi-vowels *j* and *w*, taking the words with consonants at the end first. It might be asked whether the semivowel forms a group with the preceding consonant or with the following vowel, thus producing a rising diphthong, as in *quip* or *sweet*. As I have stated above, it seems to me desirable to speak of rising diphthongs in English when the sound alternates with a falling one, as in *ear-ache*, which I have heard spoken as [jæreik], similarly to the pronunciation of *years* as [jəz]. On this point I may refer to *Handbook* ⁴, § 170 and 255. Few readers would approve of counting *yes* as an example of a diphthong, which would be the consequence of the adoption of the theory of the rising diphthongs, and they will hardly be more prepared than I am myself to agree with Trnka when he declares that *moist* ends in three consonants. The words with a consonant followed by *j* and *w* must be treated separately, and I begin with the less numerous groups with *j*, first with those with a stop, then with an open: *puce* 'purple-brown' (a technical word that I never heard used and

first became acquainted with by the novel of Robert Graves, Antigua, Penny, Puce), pule, tube, tune, cube, 'cute, dupe, duke, deuce, dune; feud, fugue, fuse, fume, suit; mute, muse, mule; newt, nude, lute, lewd, luke, the last three more usually spoken with simple u or uw. The words with final vowels have already been mentioned above (p. 22 f.), and their number is inconsiderable. We must now add the words with potential -r: pure, cure, lure; skewer. It will be shown below (p. 42) that the character of the groups with j differs from that of the groups with w.

Here follow the w-groups in the same order: quip, quid, quick, quiz, quill, quell, quad, quack, quag, queen, quake (literary), quail, quote, quite, quaff; twit, twig, twin, twill, twang, tweed, twine, twirl; dwell, dwarf; swig, swish, swim, swing, swill, sweat, swell, swap, swash, swath (and swathe), swan, swam, sweep, sweet, swede, swoop, swoon, swipe, swine, swerve, swirl, swarm; thwack, thwart. There is a double final group in twist, twitch, twinge; quince, quaint; swift, swinge, swamp, swank. Two words have a triple initial group: squelch and squaw; triple final groups do not occur. I have not mentioned the inflectional forms swum and swung. It is clear that English has a considerable number of words of the type, which does not occur in any other Germanic language, because none of them have the semivowel w in this function.

We must now turn to the groups of two consonants in the narrower sense (i. e. excluding the vowellikes and the semivowels), and to the triple groups, which always contain a vowellike or a semivowel. The subject was dealt with from a general point of view in my *Handbook* ⁴, § 150 ff., in 1925, a date that may be mentioned for the instruction of those who should imagine that the examination of consonant groups is an invention of these advanced times. As in that book, I shall deal with stops and opens separately. Initial groups of two stops are rare in most

languages, and in English there are none at all; it is well-known that English speakers ignore the initial stops in such groups when they borrow a foreign word of the type, as in *Ptolemy*, *ptarmigan*, although people who know Greek, and are completely ignorant of the study of language as a concomitant of this accomplishment, often attempt to 'pronounce' initial *pt-* in Greek words, in order to show their 'scholarship' or rather their class-education, which is not the same thing as a classical education, unfortunately for them. Combinations of two opens are also absent, for the isolated words *sphere* and *sphinx* show that the combination is not so impossible to English speakers as the groups of two initial stops, but they do not really alter the fact that this type of groups is un-English, in contrast to Dutch, where *s* is freely grouped with the back open, as in *schip*, etc., and the unfortunate *Scheveningen*, a name that is invariably mispronounced by foreigners of any nationality. We conclude, therefore, that English has initial groups of stops with opens only, and even of these there are few in actual use, the commonest being the one with initial *s*: *sp-*, *st-*, *sk-*, as in *speak*, *stand*, *scarce*. But groups with the opposite order, stop with open, which would produce the initial groups *ps-*, *pf-*, *ts-*, *dz-*, to mention some that occur in other languages, are not used in English, not even in loanwords, *psalm* for instance being spoken without the initial stop. The only word that might be mentioned here is *tsar*, but this is hardly in current use now. Combinations of *sp-*, *st-* and *sk-* with vowellikes and semivowels are quite common in English; those with a final vowel or diphthong have already been enumerated above (p. 23), so that we can supplement the data with words in a consonant or consonant group. The resulting groups with *sk-* are *skw-* and *skr-*: *squib*, *squirm*, etc., and *scrub*, *scream*, etc. The group *sp-* forms the triple groups *spr-* and *spl-* in a good many words, as in *spread* and *splash*; there is one word with *spj*: *spume*. The group *st-* takes *r* only as its third

member, unless we include stj- in stupe as a shortening of stupid, and the technical term for a kind of flannel, on which the reader may not consider it worth while to consult the dictionary. The words of the type stroke, streak, and scream, scrape need no illustration, for they are plentiful, and a look at a dictionary always shows initial groups; but words of this type with a final consonant group are rare for all three groups (str-, spr-, skr-): sprint; strict, strand, strange; script. Also squeelch.

It follows from what has been said that all the s-groups also take an r as their third member, whereas w occurs with sk- only, l with sp- only, and j in one or two words with initial sp-. Of course, this applies to words with a final consonant group, for words with j and a final syllabic sound are by no means rare, as has been shown on p. 23 (spew, stew, skew). But these groups with j have something peculiar that cannot be due to chance, any more than the words mentioned on p. 40: the combinations with j are found only in words with syllabic u or uw, as the reader may choose to transcribe the free vowel (or diphthong). It seems necessary, in spite of what has been observed above, to look upon the words with these groups as words with an initial double consonant group and a rising diphthong. In that case we must look upon ewe as a case of a purely syllabic word; but nothing compels us to go further, and to consider the initial group of yes, yard, yield as a rising diphthong, even though, speaking physiologically, there is no difference between the j of spew, stew and the one in yes, etc. As to the combinations with l, it is natural not to find the group stl- any more than we found initial tl- or dl- (p. 33), but we neither find initial skl-, which does not indeed seem an easy group but it is doubtful whether that is sufficient to account for its absence, for English surely has other groups that are hardly easier, such as skr-; the reader should remember that such groups as are found in sixths or texts are not to the point, because they are inflectional forms, and we

are here dealing with stems only. Beside the s-groups there are only two combinations with the broad sibilant at the beginning of stems, viz. tʃ and dʒ, as in *charm*, *judge*, and many other words. The reason why this sibilant is grouped with the gum-stop only is evident, for the two sounds form such an intimate junction that phoneticians have sometimes been inclined to look upon the groups as units, a kind of consonantal diphthongs, one might call them. The conclusion of this general review of initial consonant groups in monosyllabic stems is that the double groups are frequent when one of the members is a vowel-like or a semivowel, whereas the number of groups with two consonants in the narrower sense of the term is limited. In the s-groups we also find combinations with a third member, the last being a vowel-like or a semivowel.

Our next task is to examine the final consonant groups; on the combinations with the vowel-like something has already been said on p. 34 ff. It has been shown that final groups of l and the nasals with a stop or an open are very common: *shelf*, *shelve*, *false*, *help*, *plant*, *hump*, etc. Some of these groups are very frequent, such as the two sibilants after n and l: *tense*, *hence*, *finch*, *punch*, etc.; *false*, *else*, *belch*, *filch*, etc. But final soft groups of this type are uncommon; apart from the two that have already been mentioned (*bronze* and *cleanse*) there is only the technical term *lens*, to which it may be convenient to add the proper names *Thames*, *James*, and *Charles*, but the doubtful character of the last two at least may be judged from the fact that the derivatives *Jamey* and *Charley* drop the final sibilant of the stem. In contrast to the initial groups we find final groups of two stops in stems of one syllable, viz. the groups -kt and -pt; it is of some importance to enumerate the cases fully because we shall see, in the fourth chapter, that these words in final -t compete with the inflected and derived words with the suffix -t, as already noted on p. 24. The following words of the type exist: *apt*, *crypt*, *sept*; *act*, *fact*, *pact*, *tact*, *tract*, *sect*, *duct*, *bract*. It is a small

number, and this becomes the more evident when we consider that some of the words do not occur in ordinary English at all, especially sept, duct, and bract, which some readers will no doubt have to look up in a dictionary, whereas crypt, though somewhat technical, is known to every educated English speaker. In all these groups -t is the last sound; this, as well as the occurrence of the groups at the end and not at the beginning, has been explained in my *Handbook* ⁴, § 150. Two soft opens do not occur at the end of words; the same applies to the combinations of two opens at the beginning, as has already been noted, with the exception of the loanwords sphere and sphinx, which have been mentioned before. Groups of an open with a stop, with either order, are pretty common in stems, and are more varied at the end than at the beginning; we find -sp, -st, -sk, as at the beginning of stems, as in grasp, lisp, haste, post, best, bust, etc., ask, task, risk, etc.; but also the opposite order: apse, lapse, corpse, and copse (hardly any others); -ks in ox, axe, lax, tax, wax, sex, vex, mix, six, box, fox, fix, hoax, cox, coax, which may exhaust the cases, and this is of some importance when we have to deal with the forms that have the suffix -s. For this reason it may be of use to enumerate the stems in -st that I have instanced as exhaustively as possible, and to add the following: paste, chaste, boast, toast, host, to baste, test, beast, feast, chest, crest, breast. Final -ts does not occur finally any more than at the beginning of words, but final -tʃ is quite common, as in itch, fetch, etch, vetch, vouch, pitch, patch, peach, pouch, poach, parch, perch, porch, beach, beech, botch, birch, touch, teach, torch, ditch, Dutch, hitch, hatch, match, hutch, catch, coach, couch, such, search, church, much, march, March, niche, notch, wretch, reach, latch, lurch, witch, and watch. I have given the whole of the words in this group because it shows its importance as against the insignificant number of words in the other groups, in -ps and ks, for I have also tried to enumerate all the mono-

syllabic stems as far as they open with a single consonant. The final groups with sibilants differ from the initial ones in another respect: there is a soft final group [-dʒ], of which I give a complete list, at least of the words in current use: budge, fudge, page, rage, badge, cadge, hedge, forge, purge, merge, nudge, judge, dirge, surge, cage, sage, gauge, verge, large, barge, dodge, loge, doge, gorge, sedge, ledge, wedge, midge, ridge, marge, and liege. Words in [-dʒ] with two initial consonants are not so numerous, although they occur: stage, smudge, sledge, etc.

Beside the groups with a sibilant English has a considerable number of monosyllabic stems in -ft, such as haft, shaft, left, soft, etc., also with two initial consonants, as in draft, drift, cleft, croft. The number of words with a triple final consonant group is very small; there is the somewhat technical word text, and perhaps next, although this may be better counted as a derivative, for -st is felt to be the suffix of the superlative, and groups the word as such with the other superlatives, as well as first and last, in spite of the absence of a stem-word, which, besides, does not exist in the case of best or worst either, which nobody ever hesitates to call superlatives. Of course, the very idea that a comparative *should* have what is called a 'positive' is a mistake, which has caused a good deal of misunderstanding in the interpretation of their functions, as the reader may find explained in my *Grammar and Idiom*⁴, § 346 ff., or in the *Handbook*⁵ II. § 1734, although in the latter book the absurdities of 'regular' and 'irregular' comparison are still retained. It must also be asked whether we have final triple consonant groups in words of the type of minx [mɪŋks], as the current transcription has it. But is there really a back stop in this group? Physiologically, it will be hard to identify it, but that would not prevent us from accepting it from a phonetic point of view, in the same way as I have shown that in Dutch inkt there is really a -k-, for in inktfles we pronounce [ɪŋkʰfles]. Are there similar arguments for -k- in minx? The words of

this type are rare in stems of one syllable, and the only one mentioned by Trnka is sphinx, for the word that is more current, minx, escaped from his net. As far as I can see, there is no reason for adopting the view that we have triple final groups in these two words, but in the dissyllabic words it might be argued that distinct must not be separated from to distinguish, and that we must consequently say that distinct ends in a final triple group. The point is of little importance, especially in view of the fact that minx is the only current word of the type.

Groups of four final consonants do not occur in English; this may be specially mentioned, because they do occur in other languages, thus in Dutch *ernst* and *herfst*. These Dutch words are the only ones that occur, however, and are instructive for another reason: they both contain *r* as the first member of the group, naturally because it is the most sonorous of the vowellikes, so that in such a word as Dutch *ernst* there is a gradually descending scale of sonority from *r* to *n*, from *n* to *s*, and from *s* to the final *t*. In English such groups do not occur because English never has *r* before a consonant, and this again is due to the character of English *r* generally, which is never trilled in southern English (in contrast to Scotch). But it should also be considered that English has *earnest* with final *-ist*, i. e. with retention of weak-stressed murmur-vowel or *ɪ*; this is parallel to the retention of *-est* in the superlatives, on which a remark is made in the last chapter. Of course, the proper name *Ernest* follows the same principle of pronunciation as the common word.

In dealing with the monosyllabic stems with a single final consonant it has been shown that final soft consonants are practically not used in syllables with close contact, such words as *fizz* being outside the range of ordinary English words. There is evidently a connection between contact and final consonants, for it cannot be the quantity that must account for the phenomenon: both

vowels and soft consonants are long in the case of close contact. Whatever may be the explanation of this, it makes it our duty to consider the same question with regard to words in a final consonant group, although the reader will approve, I hope, of my intention of not treating this matter exhaustively, as the whole of this book is rather to be looked upon as a suggestion of lines of research than as an attempt to exhaust the subject, which runs a risk of exhausting the reader as well. One point is clear: in monosyllabic stems with final consonant groups close contact is found in the great majority of words, which releases us of the obligation to enumerate them. We need only deal here with the small class of words with free contact and final consonant groups, and first enumerate the very small number of words with initial vowels or diphthongs: arch, ask, aunt; urge; age; each and east; old; oust and ounce. The number of words of this type with an initial consonant or consonant group is naturally larger, but still very much restricted; we shall enumerate them according to the final consonant group, giving those with a single initial consonant before the ones with an initial consonant group:

1. -ft: daft, haft, raft, shaft, waft; craft, draft and draught, graft;
2. -st: cast, fast, mast, past; to baste, chaste, haste, waste, taste; boast, host, most, post; beast, feast, priest; Christ; frowst, foist, hoist, moist;
3. -sk: mask, task, bask;
4. -sp: gasp, hasp; grasp;
5. -nd: fiend; to wound; bind, find, kind, mind, rind, to wind; blind, grind; bound (adj.), hound, pound, sound; ground;
6. -nt: daunt, haunt, gaunt, can't, shan't; don't, won't; feint; plant, grant; count sb. and to count, mount, pint; point;
7. -ns: dance, glance, prance; to bounce;
8. -nf: haunch, launch; branch, ranch;

9. -nɜ: change, mange, range; strange; lounge;
10. -ld: bald; field; hold, bold, cold, fold, mould, wold;
child, mild, wild;
11. -lt: fault, halt, malt, salt; bolt, colt;
12. -ls: false.

Theoretically it might be necessary to add the many words in -tʃ and -dʒ that have been mentioned on p. 44—5, but it has already been pointed out that the twofold character of these groups is doubtful, and that there is much to be said in favour of considering them single sounds. It might also be argued that the words in -oft such as soft should have been included, for many educated people undoubtedly use the free vowel of hoard in these words, although the checked vowel is by no means uncommon, and may indeed be the sound of the majority. But at any rate these considerations tend to strengthen our suggestion that there is a connection between free contact and the final consonant groups of these words. It is also of some importance to note that none of the groups are of two stops, and that none even contains a stop as the first member, unless we include the verb to trapes or traipse, which is also used as a noun. The word is limited to familiar English, and has not been mentioned among the words in -ps on p. 25, because I do not think we can treat it as parallel to them. For the final sibilant makes the impression of a suffix, even though there is no stem without the -s. The sound may be of a similar nature to the -s of proper names in familiar conversation, such as Chips for Mr. Chipping, which has become familiar to many continental readers by the book on this type of schoolmaster; we find the same -s in many proper names in the slang of schoolboys, on which the reader may consult the study on Diminutives and Affectives that has already been mentioned. My conclusion, consequently, is that free contact is limited to some words with a final group of an open with a stop, and of a vowel-like with a stop or open; this can hardly be accidental, i. e. unconnected,

although I am not prepared to show what is the nature of this connection between free contact and the final consonant group. An attempt to explain the character of the vowels before the open consonants (as in chaff as well as shaft) has been made by Luick, *Historische Englische Grammatik*, § 555, Anm. 5, p. 708 f.; I do not think this will quite satisfy any reader, probably it did not satisfy the original author himself. And the words in a vowel-like with a consonant seem to require an explanation that can hardly be independent of the one for the words in -ft, etc. On the words with -l and l-groups the reader may consult Luick 503, Anm. 6, p. 608; on those with -n such as grant and shan't ib. 521, 2 f., on p. 644—46. Whatever may be the explanation, however, the student of living English gains one advantage from the observations that have been made: he understands that such inflected or derived words as parked and forked are phonetically marked as such, and could never be stems, as will be explained in some detail in chapter IV.

After dealing with the words that begin and end with consonants or consonant groups a remark may be added on the interjections, which have also been noticed in the treatment of words with final syllabic sounds, on p. 17. Sibilants are favoured sounds in the interjections, such as gosh, a modification of God, a mild exclamation, not really a swear-word at all. It occurs frequently in the language of the actresses in Priestley's *Good Companions* (p. 393 and 552 e. g.). Another word of a similar kind is bosh in the sense of 'foolish or rubbishy talk'. It may also be remarked here that consonants are frequently used syllabically in interjections, although they are mostly provided with a vowel-symbol in print. The hard sibilants are both used in this way, but also the stopped t with repetition, indicated by tut; of course, the sound is also used with in-breathing. The words such as to hiss, to hush, to buzz and to whizz may be looked upon as linguistic adaptations of such sounds.

Although an attempt has been made here to arrange the matter as systematically as possible, it is to be feared that the reader will sometimes find it difficult to command the host of details that had to be presented; it may be convenient, therefore, to finish this chapter with some tables that sum up the most important of the conclusions that have been reached. In the tables showing the connection between contact and final sounds I have given words rather than lists of sound-groups; when a word is between parentheses, this means that the type occurs in a few words only, and this method has also been applied in some cases of rare initial or final sounds and sound-groups.

Vowels and Diphthongs in Stems of One Syllable.

A. Free Vowels

1. single: ɔ
2. vowel with -r: ɔr — ɛr
3. vowel with another consonant: d- ɔ- ɛ-
4. consonant with vowel: — ɔ —
5. consonant with vowel and -r: -ɔr — ɛr
6. consonant with vowel and consonant:
-d- -ɔ- -ɛ-

B. Diphthongs in ɪ and u

- = A 1 1. single:
aɪ — — ou — — ju
- = A 3 2. diphthong with consonant:
aɪ- ɔu- ɛr- ou- i- (u-) ju-
- = A 4 3. consonant with diphthong:
-aɪ -ɔ-u -ɛr -ou -i — -ju
- = A 6 4. consonant with diphthong with consonant:
-aɪ- ɔu- -ɛr- -ou- -i- -u- -ju-

C. Diphtongs in -ə

- = A 2 1. diphthong with -r:
ɛər ɛər ɪər — juər
- = A 5 2. consonant with diphthong and -r:
-ɛər -ɛər -ɪər -uər -juər

D. Triphthongs in -ə

= A 2 1. diphthong with -r:

aiər auər

= A 5 2. consonant with diphthong and -r:

-aiər -ɔuər

E. Checked vowels

= A 3 1. vowel with consonant:

æ- ɒ- ʌ- e- i- —

= A 6 2. consonant with vowel and consonant:

-æ- -ɒ- -ʌ- -e- -i- -u-

This table shows that the free vowels and the diphthongs in i and u in a way complete each other, form a single group, except that the diphthongs do not occur before -r; and this gap is filled by the murmur-diphthongs and triphthongs. The checked vowels form a separate group, which occurs in two positions only, and chiefly in the second, for the number of words that begin with a checked vowel is comparatively small; those that are primarily weak-stressed will be treated in chapter V. The terms free and checked vowels will probably be clear enough; the reader will find the terms explained in the *Handbook* ⁴, § 156 ff., or the *Introduction* ⁷, § 56 f. A note on the history of the term and its value in dealing with the sounds of a language will be found in *Taal en Leven* IV. Nr. 5 (1941).

Consonants in Stems of One Syllable.

Single Consonants.

Semivowels.

Initial: j-, w-.

Final: —, —.

Vowellikes.

Initial: l-, r-, m-, n-, —.

Final: -l, —, -m, -n, (-ŋ).

Opens.

Initial: f-, v-, ɸ-, (ð-), ʃ-, —, s-, (z-).

Final: -f, -v, -ɸ, (-ð), -ʃ, (-ʒ), -s, -z.

Stops.

Initial: p-, b-; t-, d-; k-, g-.

Final: -p, -b; -t, -d; -k, -g.

Aspirate.

Initial: h-.

Final: —.

Twofold Consonant Groups.

With semivowels.

Initial: kw-; tw-, dw-; (pw-); sw-.

With liquids.

Initial: pl-, kl-, —; fl-, sl-, —, —,

bl-, gl-, —; —, —, —, —.

pr-, kr-, tr-; fr-, —, þr-, jr-,

br-, gr-, dr-; —, —, —, —.

Final: -lp, -lk, -lt; (-lf), (-ls), (lp-), —,

—, —, -ld; -lv, —, —, -l, -lm.

With nasals.

Initial: sm-, sn-.

Final: -mp, -(mf), (-ms), -nt, -nd, nþ, -ns, (-nz), -nf,
-n3, (-ŋk).

Opens and Stops.

Two stops.

Initial: none.

Final: -pt, -kt.

Two opens.

Initial: (sf-).

Final: none.

Open with stop.

Initial: sp-, sk-, st-.

Final: -sp, -sk, -st, -ft.

Stop with open.

Initial: —, —; —, tʃ-, dʒ-.

Final: -ps, -ks, —; -tʃ, -dʒ.

Triple Consonant Groups.

l with open and stop in whilst.

Open with stop and semivowel.

Initial: skw-.

Final: none.

Open with stop and liquid.

Initial: spl-; spr-, skr-, str-.

Final: none.

Stop with s and stop in the group -kst in the single word text.

On minx and sphinx, see p. 45 ff.

Contact and Final Consonants and Consonant Groups

Stems of one Syllable and an initial Vowel.

One final Consonant only.

Close Contact				Free Contact			
Stops	Opens	Liquids	Nasals	Stops	Opens	Liquids	Nasals
		ill	inn	eat	eve	eel	
				eke	ease		
ebb		ell					
egg							
add	ass			art	ass		arm
	ash			ark			
					earth	earl	earn
odd				orb		awl	awn
				ought			
					ooze		
					ice	{ isle aisle	
				out		owl	
						oil	
				ape	ace	{ ale ail	aim
				eight			
				aid			
				ache			
				ode	oaf		own
				oak	oath		
				oat			

II. Final Hard and Soft Sto

Close Contact										
	i	e	æ	u	ʌ	ɒ				
-p	lip	step	ræp	—	kʌp	tɒp				
-t	nɪt	net	næt	put	rʌt	rɒt				
-k	stɪk	nek	træk	buk	trʌk	rɒk				
Free Contact										
	i	ɒ	u	ɔ	ə	aɪ	ɔʊ	oɪ	eɪ	ou
-p	wip	ʃɒp	lup	wɒp	tʃəp	waɪp	—	—	keɪp	roup
-t	nit	stɒt	but	ʃɒt	ʃət	wart	ʃaʊt	—	—	kout
-k	mik	lɒk	(spuk)	fɒk	lək	laɪk	—	—	leɪk	fouk
Close Contact										
	i	e	æ	u	ʌ	ɒ				
-b	rɪb	web	stæb	—	rʌb	rɒb				
-d	kɪd	ʃed	kæd	(wʊd)	kʌd	kɒd				
-g	bɪg	peg	ræg	—	rʌg	dɒg				
Free Contact										
	i	ɒ	u	ɔ	ə	aɪ	ɔʊ	oɪ	eɪ	ou
-b	glib	bɒb	tjub	dɒb	kəb	dzaɪb	—	—	—	roub
-d	wid	kɒd	fud	lɒd	wəd	waɪd	kraʊd	(void)	weɪd	kouɔd
-g	(lig)	—	fjug	—	—	—	—	—	(veɪg)	(roug)

III. Final Hard and Soft Opens.

Close Contact						
	i	e	æ	u	v	ɒ
-f	stɪf	—	—	—	stʌf	kɒf
-p	smɪp	brɛp	—	—	—	klɒp
-s	mɪs	mes	gæs	(pʊs)	fʌs	lɒs
-ʃ	wɪʃ	meʃ	kæʃ	(bʊʃ)	rʌʃ	wɒʃ

Free Contact										
	i	ɒ	u	ɔ	ə	aɪ	au	oɪ	eɪ	ou
-f	lif	hɒf	ruf	dwɒf	sɛf	laɪf	—	(koɪf)	seɪf	louf
-p	hip	hɒp	rup	nɒp	wɛp	—	saʊp	—	—	loup
-s	lis	pɒs	lus	hɒs	wəs	vais	maʊs	(voɪs)	meɪs	dous
-ʃ	liʃ	mɒʃ	duʃ	—	—	—	—	—	—	—

Close Contact						
	ɪ	e	æ	ʊ	ʌ	ɒ
-v	(lɪv)	—	—	—	(lʌv)	—
-ð	—	—	—	—	—	—
-z	(fɪz)	—	—	—	(bʌz)	—
-z	—	—	—	—	—	—

Free Contact										
	i	ɑ	u	ɔ	ɜ	aɪ	ɑʊ	oɪ	ei	ou
-v	liv	sɑv	gruv	—	nɜv	draɪv	—	—	weɪv	rouv
-ð	brið	—	smuð	—	—	saið (mɑʊð)	—	—	beið (louð)	—
-z	friz	vɑz	luz	pɔz	fɜz	waɪz	rauʒ (noɪz)	greɪz	rouz	—
-ʒ	—	—	(ruʒ)	—	—	—	—	—	(beɪʒ)	—

Free Contact and Final Consonant Groups in Stems with initial Consonants

As close contact is found in the great majority of monosyllabic stems in a final consonant group, it seems sufficient to mention the cases of free contact only. The list is intended to be complete; free contact in words that end in -tj and -d3, however, are quite common, so that they are included only so as to be able to show that some syllabic sounds do not occur before these groups at all.

ɑ	ɔ	i	u	eɪ	ou	aɪ	aʊ	oɪ
-ft daft haft raft shaft waft draft draught graft								
-st cast fast mast past	cost etc.	east beast feast priest		to baste chaste haste taste waste	boast host most post	Christ	oust frowst	foist hoist moist
-sk ask bask mask task								

ɑ	ɔ	i	u	eɪ	oʊ	aɪ	aʊ	oɪ
-sp gasp hasp grasp								
-ld	bald	field			old etc. (p. 48)	child mild wild		
-lt	fault malt halt salt				bolt colt			
-ls	false							
-nd		fiend	wound			bind etc. (p. 47)	bound etc. (p. 47)	
-nt daunt etc. (p. 47)				feint	don't won't	pint	count mount	point
-ns dance glance prance							ounce bounce	

ɑ	ɔ	i	u	eɪ	ou	aɪ	aʊ	oɪ
-nʃ haunch launch ranch branch								
-nʒ change mange range strange							lounge	
-tʃ larch -dʒ large	porch gorge	creech liege		aitch age	poach etc.		pouch	

The rare cases of [u] before -tʃ and -dʒ may be mentioned separately: to mooch and gouge; as far as I know they are both unique. The free vowel [ɜ] has been omitted in the above tables because it does not occur in these words, but before -tʃ and -dʒ it is quite common, as in lurch, search; urge, surge.

III.

Stems of Two Syllables

The stems of two syllables must be distinguished according as they have the strongest stress on the first syllable or the second; the words of the former type are very common in English, both in number and in use, those of the second type, with the strongest stress on the final syllable, are less numerous and many of them are less frequently used. The reader will easily see that when he compares the words of the first type: butter, bottom, button, window, pity, any with words of the second kind: entire, parole, discern, desert, appear, ago, awake, decay. We shall deal with each group separately, and note that in the words with initial strong stress the second syllable is generally very short, and often contains a syllabic vowellike, frequently nothing else, or the murmur-vowel, generally with potential -r, as in enter. The final murmur-vowel without a potential -r is used in a very small number of words: borough, thorough, sofa, soda, polka, vista, and villa. There are a good many words with final -r, which is not exactly identical with the stressed vowel, as Sweet pointed out, and also denoted in his transcription by using the breve, a distinction that is neglected in the so-called international transcription, which has the advantage of not using diacritics, but the disadvantage of using capital letters for the vowels of pit and put, so that the convenience of printers is not served in reality, and many books show the unsightly difference of size between the small capitals of i and u and the other letters. The chief advantage of the 'international' system of transcription is that it is in pretty general use in the study of living European languages, and that is the reason why

I have used it here, as well as in my other books ¹⁾. What has been said of weak-stressed *i* also applies to *u* in weak-stressed syllables as in *lady* and in *value*. The *i* is frequent in the second syllable of the first type of stems dealt with here: *pity*, *coffee*, but *u* is less frequent, as in *value*, *nephew*, *virtue*, all of them with *j* preceding the vowel, which is almost the only case when it occurs, for as I have pointed out in my *Introduction* ⁷, p. 119, the words with the sibilant, such as *issue* and *tissue*, generally have a slightly stronger stress, which makes the vowel into the *u* of *boot*, though naturally very short. Final *-ou*, too, is pretty frequent: *window*, *shallow*, *callow*, *minnow*. Words with a 'strong' vowel in the second weak-stressed syllable, such as *insect*, *suburb*, are not numerous; on these I have already made some remarks in my *Introduction* ⁷, p. 116, where it is pointed out that the strong vowel should not mislead us into calling the second syllable medium-stressed, as has frequently been done. There is one type that belongs to the first of the two groups indicated here, but must be treated separately, i. e. the words without

¹⁾ In 1925 a number of scholars met at Copenhagen to devise a more satisfactory international system of phonetic transcription; the result of their deliberations was published in a pamphlet: *Phonetic Transcription and Transliteration*. Clarendon Press. Oxford. I quote from my notice of the proposals in *English Studies* IX, p. 122: '... the proposals of the Conference, although giving some space to the opinions advanced by Professor Jones (the advocate of the system mentioned above), do not in a single case seem to accept the notation of the International Association. As to the proposals of the Conference, I may say that they are very reasonable; but that was to be expected. I should not be sorry if all of them were unanimously adopted by all writers on language.' But I concluded: 'If the proposals are to have a considerable effect, therefore, it must be due to the energy of those who are most nearly concerned: the linguists, in the narrower sense of the word. If they consistently, and stubbornly, persist in using the new system in all their publications, in the first place in new editions of the works that have given them their reputation, the rest will follow, at least in scientific circles. But the linguists must be the advance guard. If they think that others will do the work for them, they will soon find that they are mistaken, and will regret the time wasted over a profitless task.' The last is what has happened, as I foresaw at the time.

a medial non-syllabic sound, such as chaos; they also exist with the strong stress on the second syllable, e. g. to create. Neither of these types is mentioned by Trnka; for the other words I shall make a grateful use of his word-lists.

As in the preceding chapter we shall begin with the minority of words that open with a syllabic sound; Trnka enumerates 34 that also end in a syllabic sound, with one medial consonant only, but as we do not include the words with final potential -r, there remain very few, which seems an indication that our refusal to throw the words with potential -r together with them is justified. The remaining words are: issue, eddy, any, alley, army, and also orgy, if the reader is prepared to look upon dʒ as a single sound, which may not be a necessity, but can at least be justified, as has been shown in the preceding chapter. There are two words with a strong vowel in the second syllable: essay and echo. The number of words beginning with a vowel but ending in a consonant is not considerable; Trnka enumerates 43, but he includes the words in syllabic l such as able and idle; also those with syllabic -n, such as often and even. He also counts idyll twice, because it is pronounced by some with i and by others with ai in the first syllable. When we deduct these words, which at any rate differ from the others, there remain: image, epos, edit, office, olive, avid, arid, attic, acid, abbot; item, urchin (with -tʃ- counted as one sound, as before), orbit, audit, orphan, organ, sixteen in all. It is not necessary to show that these words form a small group, but it may be pointed out that few are in common use, least of all the words with a free vowel in the first syllable. Our conclusion, therefore, is that the words with consonants at the beginning and at the end are the current type here as in the stems of one syllable, the only difference being that dissyllabic stems in a syllabic vowel-like, at least syllabic l and n, are also a type that may be considered current. Syllabic -m is extremely rare, may

be said not to exist, perhaps, for bottom may be interpreted as containing the murmur-vowel, and syllabic -n does not exist at all. It may be superfluous to point out that checked u as in put, never occurs at the beginning of dissyllabic words any more than in the monosyllabic ones, or in any type of words at all.

Words that physiologically speaking end in the murmur-vowel, such as enter, are not so interpreted by English speakers: they look upon them as naturally containing a potential -r. This is proved by the treatment of the very small group of words in the murmur-vowel without -r, as in soda or villa, for when these words occur in very close groups before a member of the group that begins with a syllable, -r- is introduced, in spite of the protests and labours to eradicate this natural tendency. Even educated people, even men who have gone through the mill of the Public School, as Hardy calls these institutions for the protection of the privileges of the wealthy classes, do not escape from this sort of 'vulgarism', on which I have made some remarks of a phonetic nature in *Introduction* ⁷, p. 74. The two words of a thoroughly English character, both in their meaning and their form, borough and thorough, are never used in groups with a connecting -r-; the cause may be that the preceding syllable contains -r-, but that cannot be conclusive, for we find -r- in such a group as terror of mind, and not in the group the borough of Elmsley, if such a borough exists. Perhaps the English words borough and thorough are not completely identical with regard to their final sounds to an Englishman when compared with such 'foreign' words as villa or idea, etc. The words in -ow like window, though generally pronounced with the final diphthong, or at least a rounded vowel resembling it, are in dialectal English invariably spoken with the murmur-vowel and potential -r; this pronunciation is not unknown among educated speakers, and is even artificially promoted by affected speakers who try to show their independence of class-

prejudices, without seeing that by this opposition to current speech-habits in their class they show this very dependence. In the speech of the latter class the final vowel often approaches an a-sound, which is indicated in the comic papers by the spelling *windah*, also by *winder*. It has been hailed as a great discovery of the successors of Sweet that words in *-er* occur without the final *-r* even though a vowel follows; the fact is true, but it is not new, for any reader of Sweet's *Primer of Spoken English* can find examples of the case, see the note at the end of this chapter, or p. 133. One of them has been mentioned in my *English Grammar*⁶, § 83, 3 (p. 84), because it is of syntactic importance; I may add here that the final *-r* does not appear when there is the slightest break, whether it is important enough to be indicated by a comma or not, which, as the reader knows, is not sprinkled over the pages of a book in the way of the Germans. Our conclusion is that words in the murmur-vowel without a final potential *-r* are outside the usual range of English words of a current type, and Sweet's practice of transcribing words like *enter* in the glossary to his *Elementarbuch* with a final *-r* is completely justified, for it is the only way to show the real character of the words when spoken in isolation. In words in *-o* such as *grotto* and *hero* the final sound is like the one in *window*, but the alternative with a murmur-vowel never occurs here, and it seems likely that most people pronounce the words with somewhat stronger stress on the final syllable because they are all felt to be foreign words, not completely incorporated into the English vocabulary, however common some of the words of this type may be: *cargo*, *negro* (but also *nigger*), *halo*, *motto*, *gusto*, *salvo*, beside the ones that have already been mentioned. At any rate, they must not be thrown together with words like *furrow*, *borrow*, *mellow*, *narrow*, *shadow*, *meadow*, *hollow*, *marrow*.

The peculiar character of weak-stressed final *-o* may also account, or help to account, for such a change as

potatoes to taters in dialectal English. A change like tobacco to baccy is probably due to the affective character of the suffix -y. It may finally be observed that final -o is the result of shortening in rhino for rhinoceros.

As in chapter II., we shall add an observation on the interjections, of which some occur with final -o: bravo, hallo or hullo or hollo, and one in u: halloo, used in hunting. The use of the aspirate has already been commented on, but it may be noted that these words are either even-stressed, or have the strongest stress on the second syllable, in which case they would properly belong to the latter part of this chapter. The causes of the twofold way of stressing hardly need be accounted for, as it occurs in other words as well, and depends on the rhythm of the sentence, on which the reader may consult *Handbook* ⁴, § 268, or *Introduction* ⁷, § 113.

Of the dissyllabic stems with consonants at the beginning and at the end the same may be said as of those of one syllable, i. e. that we never find initial ŋ- nor ʒ-; also that initial soft ð- never occurs at all, whereas in words of one syllable there are at least some few of a special type that will be discussed in chapter V. on the Form-words (the, this, etc.). As in the stems of one syllable, we find initial soft v- and z-, and in more words than in those of one syllable, as any reader can learn by going through the letters in a dictionary. Of course, they are nearly all loanwords, but that is of no importance to the speaker of living English; but it does concern him that they are little used, which also applies to such a word as vixen, which is not a loanword, another proof that we have no business in this study with the origin of words ¹). Of the single final vowellikes it has already

¹) In a sense the word vixen might be called a loanword, for its form shows that it has been taken from southern dialectal English. The New English Dictionary remarks that it is one of the few words of that class, but this is not very illuminating. The cause may be that fox-hunting used to be commoner in the south than in the north, for the south was originally by far the wealthiest part of

been stated that *l* and *n* are frequently syllabic, which never happens in monosyllables; syllabic *-n* occurs chiefly when the preceding consonant is formed in the same place, as in *button*, *sudden*, *basin*, whereas in words of the types *ribbon*, *cushion*, the murmur-vowel precedes, as well as in most words in *-m*, as in *lisom*, *bottom*, *blossom*. There is an undoubted difference from a physiological view, but the importance of this difference seems none from a linguistic, i. e. a phonetic standpoint, and most speakers will be unaware of it; indeed, it requires a trained ear to hear the difference clearly, and the same speaker may pronounce the same word in different ways according to his speed of utterance or other circumstances. Words in *-l* are distinctly syllabic even though the preceding consonant is formed in a different place, as in *able*, etc., but not in *equal* and words with two medial 'consonants', a type that will be dealt with further on. Final *-ŋ* occurs in a small number of words in the final syllable *-ing*, as in *herring*, *nothing*, *pudding*; the number of these words is so small that there is a natural tendency to look upon them as derivatives with the suffix *-ing*, and many of them are evidently so interpreted by speakers of living English, whether they were originally formed with the suffix or not. The reader will find the words concerned in the *English Grammar* ⁶, § 214, 7 (p. 268); they number sixteen in all. By the side of the words in syllabic vowel-likes and those with the murmur-vowel and the same final consonants, we also find words that have *ɪ* before *-l* and *-n*: *vigil*, *fossil*, *mobile* (cf. *noble*), *idyll*, *evil*, *cavil*; *biffin*, *coffin*, *robin*, *florin*, *cabin*, *muffin*, *vermin*; they are all nouns or verbs, whereas the words in syllabic vowel-likes contain a good many adjectives, and seem to be in more

England, and down to the end of the eighteenth century many of the fox-hunting country gentlemen in the south no doubt fraternized with their keepers and farmers and their labourers, and shared their pronunciation, as squire Western teaches us in *Tom Jones*. From this class the word may have spread to the townsmen.

common use than the words in -rl and m are, although the latter class contain some common words. Words with a strong vowel are few in number: rhubarb, franchise, coupon, and some others mentioned below, but none comparable in their frequency with the words of the groups that have been mentioned. It has already been noted that r occurs especially before gum-consonants, in *Introduction* ⁷, p. 117; of course, the cause must be looked for in the organic formation of the sounds.

Opens are not frequent finally; soft -v occurs in olive, native, concave, alcove, final -z in topaz only, final soft -ð not at all. The hard opens are in pretty much the same case: -f in plaintiff, mastiff, sheriff, pontiff, hard -th in sabbath and mammoth only, unless we include the technical terms zenith and bismuth, but all these words in hard -th are felt to be foreign, which explains why the more popular word vermouth differs in being generally pronounced with the final stop. The sibilants must be separately noticed; voiced -ʒ does not occur finally at all, the group -dʒ being available as an alternative, as in marriage, carriage, village, although the first two words might be interpreted as derivatives from marry and carry. The idea that the final syllable -ɪdʒ is a suffix may be one of the reasons why the new word garage is now often used with the strong stress on the first and the ending [-ɪdʒ], instead of the original French form [gəraʒ], as in massage. Hard final -s is frequent: novice, notice, lettuce, terrace, bodice, etc., all with the same final syllable, in spite of the vagaries of the spelling, and also lotus, focus, bogus in -əs, and the verbs in -ɪʃ: punish, finish, etc., although this final syllable is rather to be looked upon as derivative, whether there is a stem without the ending or not.

Of the stops we find the three hard ones in a limited number of words, with the vowel r or the murmur-vowel: turnip, gossip, fillip, worship; gallop, stirrup, hiccup; relic, garlic, rollick, maffick, panic; barrack, and havoc;

in some words the final -ək may suggest a derivative suffix: haddock, mattock, bullock, hillock, etc., especially when there is a monosyllabic stem of the same form, as in the case of bullock and hillock, although the suffix is not a productive one. There are also a good many words of this type with final -t: rivet, gibbet, picket, ticket, wicket, visit, limit, pocket, bucket, etc.; bigot, faggot, maggot, parrot, pivot. The soft -d occurs in a number of adjectives with the vowel i, as in wicked, wretched, rugged, ragged, naked, worsted, crooked, cursed, livid, tepid, vivid, gelid, etc.; and with the murmur-vowel in lizard, pollard, nomad, method, ballad, salad, etc. Final -b occurs in cherub only, and final -g does not occur at all. The words with a strong vowel in the weak-stressed syllable are few; I have observed the following: cromlech, kodak; kidnap; rhubarb, suburb; record (s.); humbug, and the imitative zigzag and hubbub.

Our next task is to examine the consonant groups at the beginning and at the end of stems of two syllables with the strongest stress on the first. As to their beginning it may be said that they do not differ from the stems of one syllable; the groups of stops and opens with the vowellikes, i. e. with l, r, m, n, and with the semivowel w occur here too, and within the same range: pleasure, plover, climax, bladder, blubber, blanket, bludgeon; flatter, slobber, slither; privy, pretty, primer, present, province, prudent; trigger, treasure, tremor, trolley; crackle, cradle, credit; brother, brittle, brigand, bristle; drabble, dragon; gracious, grammar, grapple; quiver, quarry, quotient; twitter; swagger, swallow; smatter, smother, smoulder; snigger, sniggle, snuggle, and no others. The number of dissyllabic words with these initial groups is much smaller than of the stems of one syllable, and some of the words enumerated here are evidently imitative words, such as many words that begin with sm-, perhaps also sn-. Most of these words end in -er or syllabic l, which has something of the character of a frequentative suffix, so that they

are hardly to be counted as stem-words. There is really only one word in two consonants, viz. climax, and this is marked as different from the rest by its strong vowel in the second syllable as well. Words with final -nt (present), -nd (brigand), -ns (province) do not really end in two non-syllabic sounds, for practically speaking we may look upon the nasal as syllabic.

There are also initial groups of s with stops, as in the stems of one syllable, also with a third member, of course a vowellike or a semivowel: spatter, scatter, stammer, study, steeple, etc.; straggle, scruple, splinter, squirrel, squander. The groups tf- and d3- are also common: challenge, chamber, chapel, chequer; gender, giant, ginger, gelid, gentle, genus, gipsy, but this list is practically exhaustive with regard to words with initial d3- in common use.

We must now turn to the final consonant groups of this type of words. It seems most instructive not to include the words in a syllabic vowellike with a consonant, as we have remarked above, when mentioning present, brigand, etc. That is the very reason why words in -nt are so numerous: errant, arrant, urgent, peasant, pleasant, silent, servant; but -nd is found in a small number of words only: errand, island, thousand, second, brigand, and the rare word fecund. The same applies to final -ns, which occurs in silence and essence only; and to -nz in orange, challenge, lozenge. I mention one word in -nz that might seem to belong here: the slang word juggins, which is aptly illustrated by this quotation in Swinnerton's *Noc-turne* VIII., 1, p. 169: Don't be a juggins, Jenny. But the word may be looked upon as inflectional, for final sibilants (s and z) are sometimes used to express familiarity, as in Mr. Chips, for Chipping, and similar cases which are dealt with in my study on Diminutives and Affectives that has already been referred to. A word like triumph ends in the homorganic group -mf; it is as isolated as gumph, nymph and lymph among the stems of one syllable. The

combination of *l* with stops is limited to *herald* and *tumult*. Groups of opens with stops are almost limited to the group *-st*, and even this group is not numerous at the end of words of this type: *earnest*, *honest*, *august*, *August*, *harvest*, *modest*, *tempest*, and the less common words *ballast*, *provost*, and the learned word *digest*. The group *-sk* occurs in *damask* only, and *-sp* does not occur at all. Groups with *-s* for their second member are also rare, and are used in learned words only: *-ks* in *climax*, *prolix*, *matrix*, *apex*, *phoenix*, *vortex*, *borax*, *calix*, *syntax*, and *convex*; *-ps* in *biceps* and *forceps* only, and *-ts* not at all, the last in agreement with the stems of one syllable. Note, too, that all these words in *-ks* and *-ps* have a strong vowel in their weak-stressed syllable, in accordance with their learned character. The only final combinations of two stops in these words are *-pt* and *-kt*: *precept*, *concept*, *bankrupt*; *perfect*, *convict*, *collect*, *pandect*; of these the last two are learned words, and also have a strong vowel in the final syllable. Combinations of soft opens and stops do not occur. Our conclusion, therefore, is that in this type of dissyllabic stems double non-syllabic sounds are rare at the end of the words, and that triple non-syllabic groups do not occur at all. The last statement is based on the view that *larynx* and *pharynx* end in *-ŋs*, on which compare p. 45 f. Two other words might be brought forward as examples of dissyllabic stems with a triple final consonant group: *context* and *pretext*; but they are rather to be looked upon as compounds, and they do not change the general character of the words of the type discussed.

The dissyllabic stems require examination from a point of view that did not call for discussion in the case of the stems of one syllable, for they show medial consonants and consonant groups. Of the single non-syllabic sounds that English possesses, three do not occur in this position in stems: *ŋ*, *j*, and the aspirate; such a word as *behind* must be looked upon as a compound. All the other consonants, including *l*, *r*, *m*, and *n*, are used in medial position,

which it is not necessary to prove or illustrate. With regard to the opens, however, which required special consideration on account of the distinction of close and free contact in the stems of one syllable, it must be remarked that nearly all of them occur medially, and that their occurrence is generally independent of the way of contact, in other words, that they occur after free and after checked vowels. The following table supplies characteristic examples of the types that occur.

Hard Opens		Soft Opens	
Checked vowel	Free vowel	Checked vowel	Free vowel
offer	sofa	never	lever
	to gopher		
listen	basin	cousin	reason
mission	nation	pleasure	fusion
—	author	leather	either
whistle	—	muzzle	weasel
lissom	—	chasm	besom

The table shows that in words that end in -er or in syllabic -n the medial opens occur both hard and soft, except that hard -th- is used in words with free contact only. In words that end in syllabic -l and syllabic -m we find medial -z- after checked and after free vowels, but hard -s- in syllables with close contact only. Medial soft -th- occurs in one single word of a technical character: rhythm. The words of these types are not numerous, and those with syllabic -l and -m are decidedly rare. The table shows that a proper name like Ethel, with checked vowel and hard -th- has no parallel in the common words. The soft -th- in words in -er seems to be characteristic of imitative words; we find them in the slang words to dither, blither, smithers (or smithereens), slither. Some examples of dither and blither may be welcome to some readers: But when he had climbed the stile and set off up the field-path, his thoughts dithered—as they had been dithering all through those months in hospital.

Frankau, *Martin Make-Believe*, ch. 7, p. 59,—... so that the rest of what she had just said was only a dither to him—and even the face of her a dither before his eyes. *Ib.* ch. 34, p. 283. Of the same type is to bother, which seems to be to pothor sometimes, although I never heard it. The open consonant is not the primary cause of the imitative character of these words, however, for we have words with a medial stop that are evidently of a similar type: to dodder, to totter, to potter; perhaps such words as noddle and noodle are also to be considered from this point of view. The words blither (verb) and blithering are illustrated in the *Supplement to the New English Dictionary*; for blithering it gives a quotation from Frankau, and remarks that it occurs in the group a blithering idiot; I also find the group a blithering fool in Beresford, *The Camberwell Miracle*, ch. 2, p. 19 (Penguin). The same author uses to diddle, clearly of the same character: But, this Davies fellow knows darned well that he wouldn't stand a chance with a committee of medical experts. No hope of diddling them. *Ib.* ch. 9, p. 138. The speaker is a 'famous' doctor, speaking of what he calls a 'quack'. I may also mention a word that belongs here from the same book, to tetter: His wide-eyed frightened stare was gone, he no longer tettered like a goat. *Ib.* ch. 8, p. 123. The verb to diddle also occurs in Rose Macaulay, *Crewe Train II.*, ch. 7, 1, p. 130: I don't believe they're diddled by a word we say.—Of course, the repetition of the consonant is significant: see p. 179.

It is only what was to be expected when we find that medial consonant groups are more varied in their character than initial and final ones, for in medial position the groups often break up into two parts, each belonging to one of the two syllables. The consequence is that medial consonant groups cannot be properly compared with the initial and final ones, although they inevitably agree in some points. For this reason I shall treat of the medial groups independently of the initial and final ones, and

only take notice of them in so far that I begin by enumerating the medial groups that are also current in the other positions, although their identity is frequently apparent only, for the reason mentioned, as is shown by the comparison of apt and chapter, or vex and buxom, i. e. [bæk-səm], or [bæk-sm].

Groups with w for their second member are limited to -tw- and -kw-: equal, sequel, sequence, liquid, frequent; and the single case patois, a word of limited use. We might add the proper names Edwin and Edward. Of the possible groups with -l we find -pl-, -bl-, -gl-, and -sl-: couplet, surplice, poplar; goblet, goblin; ugly; porcelain, ostler, purslane¹). With -r for the second member there are more, all of them with initial stops, both hard and soft: apron, April, cypress; fabric, zebra, hybrid; sacred, acrid; negro, vagrant; patron, partridge, petrol; hydra, hydrant. The number of groups with l for their first member is more considerable, especially with -t and -d, but also with -k, and the opens -s, -f, and -z, -v: alter, welter, filter, falter, palter, halter; elder, alder, boulder, solder, polder; polka, alcove; also, balsam; pilfer, sulphur; palsy; silver, salvo, velvet. The groups sm- and sn- that are so common initially occur in four words only: asthma, isthmus, jasmine; parsnip. But a nasal at the end of the first syllable is one of the commonest phenomena, and may indeed illustrate one of the functions of final nasals: empire, temper, pamper, tamper, umpire, vampire, ample,

¹) A reviewer of the Dutch edition pointed out that other medial groups exist, such as suckle, riddle, wriggle, etc. He even discovered that there is a contrast between the medial groups -tl- and -kl-, which does not exist initially, as pointed out on p. 33. But the reader will probably have seen that we have no medial non-syllabic group at all in the words quoted: the l is syllabic and final in them. Such pairs as subtle: suckle, cattle; cackle, tattle: tackle, little: tickle, beadle: beagle, riddle: wriggle, straddle: straggle, waddle: woggle, and butler: buckler, on the contrary are intelligible only when we consider that the groups are not medial at all, or rather that the sounds do not form groups: [sæk-l, sat-l], etc. We might perhaps add the proverb Many a little makes a mickle.

simple; banter, enter, phantom; founder, flounder, ponder, pander, bandit, bandy, thunder, tender, index; insect, incest, insult, fancy; pansy; ancient; venture; angel, banjo, danger, conjure, ginger; anther, panther, anthem; comfort, pamphlet. The medial group -lp- does not occur, whereas it is frequent finally, nor do we find -lth-, but this is also rare in end-position, as has been observed in dealing with the doubtful cases health and wealth.

The frequent groups of s with stops in initial and final use are also common medially, especially -st-: aster, easter, fester, vista, vestige, pasture, sister, blister, bluster, glisten, etc.; also -sk- in whiskey, whiskers, basket, and -sp- in vesper and whisper. Of the other opens -f- is grouped with t: after and rafter, no more. Stops with -s- as their second element occur in taxi, exit, buxom, maxim, proxy; and in gipsy and dropsy. Two opens do not occur medially, apart from asphalt, naphtha, and diphthong, the two latter being often assimilated to English habits of speech by using the group -pp-. Groups of two stops occur, but they are not common; -kt- is the most frequent, and is used in hector, rector, ictus, victim, cactus, spectre, none of them words in daily use, except victim, perhaps. The group -pt- occurs in sceptre and chapter. Of the triple groups there is one in medial use in this type of words: ostrich.

The preceding remarks show that the medial groups that are also used in other positions are few in number, and that they are used in a small number of words in most cases. But the number of medial groups is in reality very considerable, as we shall now show, in our enumeration of those that are restricted to medial use. A very important group is formed by those that have a nasal to close the first syllable, a function of the nasals that has been repeatedly referred to in the preceding pages; the reader will remember that the groups of nasals with stops (such as -mp-, -nt-) have already been dealt with. The most numerous of the medial groups with a nasal

for their first member are those that begin with -n-, which can be more freely grouped than those with m or n first, for these two are combined with homorganic stops only; but both m and n are combined with the semivowel w, whereas j is grouped with n only. Both m and n are grouped with opens. The facts are most easily seen by going through the following table, which probably does not exhaust the cases, but not many will have to be added.

1. nasals with j, w, l, r.

- mw-: chamois, memoir.
- ml-: omelette, hemlock.
- mr-: comrade, shamrock.
- nj-: onion, pinion, poniard, cognac.

2. nasals with opens and stops.

- mb-: amble, ambush, amber, chamber, ember, ombre, timber, somber, number, fumble, symbol, tremble, stumble, humble, limber, limbo.
- mz-: damsel, damson, crimson; some might think of adding such words as clumsy and flimsy, but they seem to require an interpretation as derivatives, independently of the circumstance whether the stem can be traced by the speaker of living English or not. Of course, the answer of the student of the history of English to this question, supposing he could give it, would be of no value whatever for our present purpose.
- mf-: comfort.
- nv-: anvil, anvoy, envy, canvas, to canvass.
- nz-: stanza, frenzy, quinsy.
- np-: anther, panther, anthem.
- ŋg-: anger, finger, hunger, jingo, mango, angle, dangle, fungus, bungle, single, shingle, bangle.
- ŋk-: anchor, Yankee, donkey, monkey, ankle, hanker, conquer, tankard, rancour, rankle.

Compared with the number of groups of nasals with these four sounds, those with l for their first member

form a small company: -lw- in bulwark; -lj- in alien, pillion, billiard, billion; -lv- in salvage, which is rather a derivative than a stem word; -lb- in elbow, album, halberd; -lt- in vulture, unless the word is spoken with -ltʃ-.

The superior importance of the nasal as the closing sound of the first syllable becomes even more evident when we add the triple groups.

1. with closing -m-: pamphlet, emblem, tumbrel, timbrel, hamster, empty. Perhaps we might add the personal name Humphrey.
2. with closing -n-: antler, minster, monster, country, gentry, pantry, hundred, laundry (perhaps derivative rather), wainscot, instant, instance.
3. with closing -ŋ-: banquet, vanquish, tranquil, jonquil, language, mongrel.
4. with closing -l-: culprit, pilgrim, caldron (or cauldron), bolster, palfrey, ulster.

There are quadruple groups in minstrel and monstrel, neither of the two in common use. A good many of the more frequent cases of closing nasal have already been enumerated on p. 73 f.

A succession of a stop and l is rare; it occurs in ugly, bugle, buckler. We also find -tl- and -dl-, groups that do not occur initially or finally, as shown on p. 33: butler, atlas, cutlace, motley; bedlam, medley. Also -vn- in evening, although this resembles a derivative, as has already been pointed out (p. 8). There is a larger number of words with a stop in the first syllable and -n- in the second: kidney, laudanum [l dn m]; cockney, hackney, picnic; signal, magnate, pigmy, dogma, stigma. Combinations of stops with opens are restricted to the sibilants, and even these are rare: kʃ in action, faction, fiction, and fraction; -ds- in medecine; -ts- in curtsy; -bs- in absence and absent.

Triple groups of opens and stops with final -r- occur in nostril, ostrich, and plastron; two stops with an intervening -s- in extant, sexton, and lobster, but the latter

has all the appearance of a derivative, and in the quadruple group -bstr- in abstract the first part seems to be a prefix to an unlearned reader, and that is the class whose language we are examining. But there are two other quadruple groups: -kstf- in exchequer, and -kskj- in excuse; the first word is a technical one, the latter is of a special kind, for the -j- may be grouped with the following vowel, as has already been discussed in the second chapter.

The most noteworthy result of this review of the medial consonant groups in dissyllabic stems seems to me the frequency of nasals as the closing sound of the first syllable. This reminds us of the observation made about the occurrence of the velar -n, which in words of one syllable occurs finally only, and in dissyllabic stems in the group -ng- only. It appears that one of the chief functions of the nasals generally, and of the velar one in particular, is to close a syllable; and this is naturally most emphatically so in cases of close contact, although words with a final nasal and free contact are by no means rare: room (but also with the checked vowel, as invariably in Sweet), womb, tomb, climb, clime, teem, tame, soon, queen, etc.; it has already been observed that the velar nasal does not occur after free vowels or diphthongs. In general we can say that the consonant groups are limited in their medial use, that some groups occur initially or finally only, others medially only, the number of the latter being considerable as far as the number of groups is concerned, not when we count the number of words formed with them. It would seem a mistake to me to look for a cause of the limited use of some groups, although it is evident that some are more convenient than others; it should be considered that the number of possible groups is so large that a language has no need of them all: the 'richness' of a vocabulary has undoubtedly advantages, but wealth brings its unpleasant consequences in the vocabulary as well as in life, on which it is not necessary to dwell. Some readers will be tempted to

explain the facts observed by pointing out the historical causes that have produced them. No doubt, a good deal of historical learning can be aired in this way, but it is clear to me that the facts of living English are not interpreted by it, however much we may learn about the ways in which languages change, which is not the subject of this study. As to the 'explanation' that words that show peculiarities in their phonetic structure are loanwords, this does not help us at all, for many loanwords are completely incorporated into English, indeed, it is doubtful whether we have a right to speak of the very idea of 'foreign' words in an analysis of the phonetic structure of English, for loanwords are not distinguishable in English, as they are in such languages as Dutch and German, although even there the distinction is frequently nugatory, or misleading. Thus, it may be said that the unusual group -sm- occurs in *asthma* and *isthmus* only, and that these are loanwords, but the really important point is that the words are rare; the medial group -sn- is found in *parsnip* only, and the fact that it is a loanword, too, does not change the impression of the modern speaker that it is a perfectly 'ordinary' word. Another point is that *parsnip* is probably associated with *turnip*, and that speakers probably have an impression of derivatives, independently of the circumstance that there is no corresponding stem at all. Something of the same sort has been remarked above when dealing with *kidnap* and *humbug*. The words in full -o, that do not vary with the final murmur-vowel, such as *motto*, *halo*, have also been mentioned as in a special class that is distinct from words like *to borrow*, *shallow*, *gallows* (often *gallows*), and the still commoner words in -y, such as *pity*, *city*, *better*, etc., although some of these are also loanwords. Our conclusion is that the origin of words is of no concern to us in an analysis of living English, just as it is of no importance in the government of a civilized country whether citizens are of 'home' origin or of 'foreign' extraction, even

though their names indicate that their forefathers hailed from the East or the West; on this point, see *Het Nederlands van Nu*, p. 25. It has already been observed that words with a strong vowel in their second syllable, such as *convex*, *abstract*, *insect* have not been completely adapted to the English sound-system; these words often show medial consonant groups that do not occur in other words.

Something can be learned about the importance of the words of the type discussed (the dissyllabic stems with the strongest stress on the first) by considering their numerical importance in comparison to the words of one syllable and those of two with the strongest stress on the last syllable. On this point we find information in Trnka's book: he counts 3178 stems of one syllable, and adds that of these 77'91 % have an initial and a final non-syllabic sound or a group of these; the number of dissyllabic stems with the strongest stress on the first syllable is 2209, and in these the commonest types are those with an initial and final consonant or with an initial consonant and final vowel (*pity*), the medial non-syllabic sounds being single or double, in all 78'5 % of all the dissyllabic stems of this type. As to the frequency of medial single consonants and consonant groups in the dissyllabic words of the type discussed in the preceding pages, Trnka has counted 1486 (out of the 2209) with a single medial consonant, 640 with two; this means that the single medial consonants occur in 67 % of the whole, the double groups in 29 %, whereas the rest is negligible in number, but also largely in the importance of the words themselves. These statistics seem to teach us something about the character of words in living English: the relatively important percentage of the dissyllabic stems in comparison to those of one syllable, and as to the dissyllabic stems, the preponderance of single medial consonants.

A final remark must be made on a type of dissyllabic stems that is neglected in Trnka's lists, and has never

had any attention paid to it elsewhere, except that I have pointed out their peculiar character as 'learned' words in earlier editions of the *Introduction* as well as in the last, §§ 180 ff., which supplies a complete list of them, as far as the current words are concerned, so that I can confine myself to a few examples here: chaos, to create, deist, diet. A few are common words, such as quiet, iron, but these are a minority in this group, although they cannot really be called rare: triumph, lion, dial, trial, riot, pious, bias, ruin, cruel, gruel cannot be properly called unusual words. But this epithet can be applied to such words as druid, fluid, dais, prior, duet, phial, and others mentioned in the lists of the *Introduction*, although many of the words mentioned there are words of more than two syllables. The character of the words without an intermediate non-syllabic sound seems to be shown by the fate of the name of Aerated Bread Company, which established teashops all over London at the end of the nineteenth century, providing the wonderful new bread, called aerated bread, but people found the word too difficult, and made it into aireated; in these advanced times the problem is even more easily solved by saying ABC shops. We similarly find the new word aeroplane pronounced with the first syllable of air, and shortened to [ærou]. The group [aɪə], on the other hand, has nothing peculiar to an English speaker, as in client, diet, quiet; the second syllable is so short, however, that the comparative of quiet is most naturally quieter, as pointed out in *Handbook* II.⁵, § 1726 ff., and the same applies to other dissyllabic words. It is also pointed out there that the second syllable of these words becomes even shorter when the suffix of comparison is added, so that it is practically negligible. Such a word as create, on the other hand, is unusual, and this explains why it is not associated with creature in the minds of unlearned speakers.

The second type of dissyllabic words are those with the strongest stress on the last syllable: ago, charade;

their number is small, so that we need not dwell upon them long. Words of this type generally begin and end with a non-syllabic sound, like the rest of the words that have been treated, and it will be convenient here, too, first to dispose of the words with a syllabic beginning or end, first of all with both of these, which are seven in number: obey, ally, allay, alloy, allow, agree, ago, unless we include idea, which may also be looked upon as trisyllabic, perhaps. Of course, we do not include the words in potential -r: appear, affair, attire, austere, entire, ignore. Words in a syllabic sound but with a consonantal beginning are also few in number: decay, decoy, defy, deny, decree, degree, canoe, taboo, tattoo, shampoo, portray, bureau, plateau, trousseau (also with initial stress). The words with the initial syllable de- make the impression of derivatives, all the more when there are words without the prefix that are or may seem related as decoy and coy (unrelated in sense and origin), degree and graduate (related in sense and origin). The number of words with an initial syllabic sound and a consonantal end are more numerous; the ones in general use are: attack, enough, among, again, afresh, appeal, ordain, elope, advance, adjourn, about, alarm, arrest, immense, occult, antique, oblique, esteem, acute, approach, indict, excise, exchange, oblige, exert, exact, excuse, exult, exalt, exhort, intrigue, employ; the other words are of no practical importance for the structure of spoken English. According to Trnka's lists there are 80 words of this type with either initial or final syllabic end, which together with the seven words with a syllabic sound at both ends, makes 87, a considerable percentage, when it is considered that the total number of words of this type is only 229, for it comes to 40 %. In the words of one syllable the percentage of words with a syllabic beginning or end or both amounted to 13 % according to Trnka, and this is higher than the facts warrant, for he includes the words with potential -r, whose number is not inconsiderable. And Trnka claims

that the number of dissyllabic words with an initial or final syllabic sound, or both, and the strongest stress on the first syllable is 37'21, again including the words in potential -r. We see, therefore, that a more considerable number of words of the type dealt with here show syllabic beginning or end than in either of the types first dealt with. And the contrast would be still more marked if we not only excluded all the words with potential -r which are included in the percentages of Trnka, but included words like *akin*, *alive*, *along*, and the many words with the prefix *ad-* in its various forms, like *accede* (cf. *precede*), *admit* (cf. *permit*), *advance*, *assent* (cf. *consent*), etc. It is evident that these words are to be interpreted as formations with a prefix, which are dealt with in chapter IV., but any attempt strictly to distinguish the two types of words would be a complete failure.

We now turn to the words of this type with a non-syllabic beginning and end. It has already been remarked, on p. 14 f., that words with a weak-stressed initial syllable do not begin with an aspirate in English; yet, we have such words in *harangue* and *hotel*. The first is hardly in common use, the second is not rarely spoken with the initial vowel, and Sweet transcribes the group with the article as [ðɪ ðutel] on p. 84 of his *Primer of Spoken English*, although he writes [ðis hɔutel] on p. 82. This may suffice here to convince the reader of the peculiar character of the words with initial *h-* in weak-stressed syllables; some remarks on form-words of the same type, perhaps we should say of what only appears to be the same type, will be made in chapter V. Little need be added here to what has been said about the single initial and final consonants in words of the types already dealt with; but it may be useful to point out that final -3, which is hardly used in stems of one syllable at all, occurs in a few dissyllabic words of the type treated here, as in *prestige*, *massage*, *garage*, although the two last words may be rather looked upon as derivatives with the suffix

-age. Apart from this, the last word is often spoken [gærɪdʒ], and this is probably the current way of pronouncing this familiar word. Medial -ʒ- occurs in regime only. We now turn to consonant groups, which are nearly exclusively such as have an r as their second element at the beginning of words: trousseau, trepan; dragoon; crusade, cravat; grimace, grotesque; precise, protect, protest, present, profound, prestige. Here, as before, some words might be cancelled as properly derivatives, as protect (cf. detect), protest (cf. detest), present (cf. consent). The only group with an open and -r- is fr- in frequent. With l we have only plateau and blaspheme; with w there is a case in cuirass; with st- in stampede. There is as little variety in the final groups, the chief being -n with t or s: comment, cement, lament, ferment, present, profound, frequent; commence, finance, romance, immense. Also -lt in occult, exult, and exalt; a few more with final -st: arrest, digest, robust, august, batiste; and -sk: burlesque, grotesque, but they are to be looked upon rather as derivatives. Combinations of two final stops occur: correct, protect and detect; corrupt, abrupt. Medial consonant groups are also rare, but the small number of the words must be taken into consideration: to frequent; caprice, approach; recruit, decree; agree; patrol, portray, latrine; adroit; oblige, oblique; ignore; pontoon, entire, canteen, antique; indict; monsoon; champagne, campaign, shampoo, stampede. The only current combination of an open with a stop is -st-: austere, distil, festoon, pastiche, prestige, costume (perhaps more often with initial stress). There remain -gz- in exact, exert, exhaust, exhort, exalt, exult; and some isolated cases: blaspheme; excise; capsize; and the triple groups in empty; intrigue; estrange, destroy; finally the quadruple groups in exchange and excuse, unless these words, too, are discarded as derivatives when we compare accuse, the simple change, to which might be added to estrange, for it is undoubtedly associated with strange. As the inter-

jections have been treated in the two types that have been dealt with, I add that there are two of the dissyllabic type with final stress: *alas* and *ahoy*, the latter by the side of monosyllabic *hoy*.

Two things are clear: the dissyllabic words of this type form a small minority among the words of two syllables. According to Trnka's lists the numbers are 2209 of the first group (with initial stress) and 229 of the second. The second point is that many of the words of two syllables with final strong stress are evidently related to the derivatives, from which indeed they cannot be strictly distinguished. As to the proportion of words of one syllable and of two, the totals do not differ very greatly: there are 3178 stems of one syllable, and 2400 of two (the two ways of stressing being ignored). Any conclusion with regard to the structure of English words in their actual use would be a mistake, however, for we have only dealt with the stems, and large as the field of stems is in English sentence-structure, no idea can be formed of the structure of English words as they are actually used, unless we include an examination of the changes that inflection and derivation and composition make. Words of one syllable often become dissyllabic by inflection or derivation, and dissyllabic words in the same way become words of three syllables, etc. Composition makes still greater changes, so that we must now turn to these ways of modifying the form of words in English.

Note on final -r. On p. 64 the reader is referred to Sweet's *Primer of Spoken English* for examples of words with potential -r that occur with the final murmur-vowel although the next word begins with a syllabic sound. Some readers, however, may care to have some examples pointed out to them, apart from the one discussed in *English Grammar* ⁶, section 83, 3; for this reason I shall enumerate the cases that I have observed, although without any systematic search.

There are two examples on p. 58, lines 19 and 24. For the convenience of the printer, and possibly of some readers, I turn the sentences into ordinary spelling, italicizing the word concerned: This was so exciting that I forgot my former *terror*, and ran to the wall... (l. 19). —...for I saw round, yellow balls of *fire* on all sides.—On p. 60, l. 7: He sank up to his waist, and uttered a most pitiful cry of *terror* and despair.—On p. 74, l. 28: Most of the labourers' cottages about *here* are built in this style... —On p. 80, l. 27 f.: Well, which train shall we go by to-morrow; there's one at nine and *another* at half past twelve or twelve-thirty, I forget which.—

The interpretation of these cases, it seems to me, can be left to the reader; but I may expressly say that there can be no question of misprints, which are extremely rare in Sweet's little book. Many years ago I thought I had discovered one, at least the explanation did not seem certain to me: it is this passage on p. 84, l. 17: Oh, here you *are*; I could not find you.—We find potential -r here although the word occurs at the end of the sentence; I wrote to Sweet about it, and in answer to my inquiry he informed me that there was no mistake. The case shows that final -r occurs in any case, provided there is no break at all before the next word.

IV.

Inflected Words, Derivatives, and Compounds

In studying the phonetic forms of words as far as they are due to the changes that inflection, derivation, and composition make, it is advisable to treat each of the three ways of word-formation separately, although inflection and derivation cannot always be strictly distinguished, any more than derivation and composition. It is also true that compounds and derivatives show many similarities, especially in the matter of medial consonant groups;

but a separate treatment brings out the differences more clearly, and compounds show many medial consonant groups that are never used otherwise. In dealing with inflected and derived words we shall deal with monosyllabic and dissyllabic stems only, as these stems have been treated only until now, and it does not seem profitable to forestall the systematic investigation of stems of more than two syllables that may be undertaken soon.

English words are inflected by suffixes only, and the number of these is small, although each of them is used in more than one function. The first suffix is the sibilant, which appears in a triple form: -s or -z or -iz; it is used for the plural of many nouns, for the genitive, and for the third person singular of the present tense of many verbs. The second suffix also has a triple form, being -d or -t or -id; it serves for the preterite and the perfect participle of many verbs, and for adjectives derived from nouns. It might be possible to include the weak-stressed prefix [tə] and [tu] that is used to indicate the non-finite character of most verb stems: to go, to ask; also the weak-stressed prefixes [ðə] and [-ði] before nouns or noun-groups to indicate that they are taken in a definite sense, as in the man, the old man; but it is usual to look upon these prefixes as words, as also in the case of the same prefix before adjectives or adverbs in the comparative (the sooner the better) and the prefix [ə, ən] in nouns or noun groups, as in a man, an old man, usually called the indefinite article. The prefixes are all three dependent for their form on the syllabic or non-syllabic beginning of the following word, which shows their character of form-words, if they are to be called words at all. Of course, the demonstrative adverb before comparatives may be said to have something of an independent meaning, in spite of its lack of an independent form, but the other cases should not be treated as words in the ordinary sense, for this makes the interpretation of their use difficult or impossible. The use of the prefix *to* especially can be made clear only if its true

character is recognized, as has been shown in my *Handbook* ⁵, § 203 ff., more briefly and perhaps even more conclusively, in my *English Grammar* ⁶, § 215 ff. It might be argued that such verbal forms as *drink*, *drank*, *drunk* are an inflectional group, but *drink* is different from the two others in that it is the only one that takes inflectional or derivative suffixes, such as in *drinks* and *drinking*, which makes it the primary stem, if the other two can be called stems at all. There is really nothing to show that *drank* and *drunk* are inflectional, for the alternation of *i* and *æ* occurs in a great many words that are not connected at all, as in *rick* and *rack*, *pick* and *pack*, *fit* and *fat*, although it is used as a means of word-formation when the sounds are repeated, as in *riff-raff*, on which see *Handbook* ⁵, § 1913 ff. Pairs such as *can* and *could* will not be included here either, for they are rather to be looked upon as members of suppletive groups that often have nothing in common except the initial consonant. The advantages of treating these 'words' in the way suggested here will be apparent to the student of syntax who examines their treatment in the *English Grammar* ⁶. With regard to the so-called auxiliaries, I specially refer the interested reader to the latter book 484 (p. 539—542). Although the prefixes mentioned are not treated here together with the suffixes, they are not for that reason neglected, and will be found dealt with in the next chapter on form-words. A suffix that is intermediate between the inflectional and derivative ones is the suffix *-ing* as far as it is used in words with a distinctly verbal function, which makes it necessary to incorporate it with the rest of the verbal system, whereas such words as *bedding*, *matting* are, of course, purely derivative. In many words of this type the distinction between inflection and derivation is impossible, even in a given context.

In dealing with the suffix *-s* in its various forms, it will be convenient to separate the three forms *-z*, *-s*, and *-iz* systematically, and to treat the wordforms with each of

these final consonants or this syllable in the order of the preceding sound before the sibilant, first dealing with the forms in a single sibilant, and secondly in a non-syllabic group (vowellike or consonant with sibilant). It has already been shown that there are hardly any words of one or two syllables that have a final syllable with close contact and strong-stressed soft opens; words of this type in -z are limited to the imitative monosyllabic ones enumerated on p. 31, and as a word never ends in a checked vowel the suffix -z cannot form inflected words of that type, apart from the isolated forms *says, does, has, is, was*, the last three of which are chiefly used with weak stress. Dissyllabic stems with a weak-stressed final -z do not exist in English, apart from the rare word *topaz*, mentioned in ch. 3; we can conclude, therefore, that any word of two syllables in a weak syllable with -z after the vowel must be an inflectional form, as is instanced by *pities, cargoes, bellows*, etc. Strong-stressed syllables with free contact and final -z (without any preceding consonant) are common in stems, as in *ease, nose, bruise, noise*, etc., but they are equally common as inflectional forms, which makes it advisable to mention the homonyms that I have observed, arranged according to the vowel or diphthong: *parse* and *pa's*; *furze* and *furs* or *firs*; *cause* and *caws*, *pause* and *paws*, *clause* and *claws*; *ease* and *e's*, *tease* and *teas*, *seize* and *seas* or *sees*, *freeze* and *frees*, *please* and *pleas*; *ooze* and *oo's*, *muse* and *mews*, *ruse* and *rues*, *booze* and *boos* (imitative verb), *bruise* and *brews*, *cruise* and *crews*, *blouse* and *blues*; *baize* and *bays*, *daze* and *days* or *day's*, *gaze* and *Gay's*, *raise* and *rays*, *phrase* and *frays*, *graze* and *greys*, *praise* and *prays*; *close* and *clothes*, *rose* and *rows*, *hose* and (he) *hoses*, *nose* and *no's*, *doze* and the plural *does*; *wise* and *why's*, *guise* and *Guy's* or *guy's* or *guys*, *size* and *sighs*, *prize* and (he) *pries*; *rouse* and *rows* (*quarrels*), *to house* and *how's*, *to browse* and *brows*. The words with a murmur-diphthong and final -z are invariably inflectional, as *scares, fours, stores, fears*, etc.; it has already

been noted that there are no words with medial murmur-diphthongs before -z, on p. 4. Of course, there are homonyms among inflectional forms, such as eyes and aye's (the ayes have it), and also bares (this sea that bares her bosom to the moon) and he bears (a load), and the plural bears, but we are not at present concerned with these kind of homonyms. Words of two syllables with the strong stress on the second are not common, but they do not differ from the monosyllabic ones, as taboos. It follows from what has just been said that final -z after a syllabic sound generally leaves no doubt whether the word is inflectional or not. It may be noted here that there are a good many pairs of words that differ only in their final sibilant, the form in hard -s being a stem, the one in soft -z being an inflectional form, as purse and purrs, course and cause, lace and lays, pace and pays, dose and the plural does, cease and sees or seas, etc.

It has been shown in the first chapter that stems of one syllable never end in a soft consonant group with a final open, apart from a few cases that need not be repeated here. The same applies to the stems of two syllables, whether the first syllable is strong-stressed or the second. The consequence is that a final soft consonant group in -z marks a word as inflectional, as in hems (noun or verb), hens, things; comings and goings, puddings; saves, paths; robs, fads, dogs. Also in a few words in -lm: films, realms, elms. On words like means, alms, etc., see the last chapter. The general conclusion is therefore that a soft final -z is characteristic in the great majority of words of inflectional forms, the only exception being a number of stems in a syllable with free contact and final -z, such as have been enumerated. Another conclusion may be of some importance to the student of the history of English: the primary form of the suffix of the genitive of nouns, of the plural of nouns, and of the third person of the singular of the present tense, is soft -z, the hard -s being the result of assimilation, i. e. of a secondary character in living English.

This is in agreement with the form of the suffix of stems in a sibilant, which take *-iz*, whereas stems in *-is* are current, such as *promise*, *justice*, a contrast that has a parallel in the derivatives in *-ese* with soft *-z-*, whereas we have hard *-s* in such stems as *obese*.

We must now turn to the wordforms in a strong-stressed syllable with final hard *-s*. If a vowel precedes, of whatever kind, free or checked (including the diphthongs), such as *case*, *cease*, *dose*; *cross*, *to hiss*, *chess*, etc., the word is inevitably a stem, so that we need deal with the forms in a consonant group only. Final hard *-s* in this type of words may be either part of the stem, as in *lax*, or an inflectional suffix, as in *lacks*, the third person of the present tense of *to lack*. But such pairs are by no means common, and the range of consonant groups with a final hard *-s* is very limited, as has been shown on p. 44; we have seen that they are limited to the groups *-ps*, *-ks*, as in *to lapse* and *tax*, but even this must be restricted, for they are found in syllables with close contact only, so that in all other cases wordforms in these two groups must be inflectional, and a fortiori in all other groups with final hard *-s*, which it will be useful to enumerate. They are: *-ts*; *-fs*, *-ths*, as in *hats*, *coughs*, *deaths*; and on account of the free contact the following wordforms in *-ps* and *-ks* must also be inflectional: *grapes*, *hopes*, *heaps*, *parks*, *bakes*, *hikes*, etc. There is more: the number of stems in *-ps* with close contact amounts to four only, as shown in ch. 2 (*apse*, *lapse*, *corpse*, *copse*), so that all other wordforms of this type are necessarily inflectional, and of the four stems mentioned there are two that have a parallel inflectional form: (the water) *laps* (against the ship), and the plural *cops*, for the meaning of which some readers may have to refer to the dictionary, for it is in very limited use, as well as the verb *to cop*. The number of stems in *-ks* is more considerable (see ch. 2), but some of them have a homonymous inflectional form: *lax* and (he) *lacks*, *tax* and (he) *tacks*, *cox* and the plural *cocks*

and the verbal form (he) cocks (his hat), coax and the plural cokes. All other consonant groups with a final -s are elements of inflectional forms, such as insists, bursts, acts, adapts, grasps, tasks, risks, tastes, beasts, etc. Weak-stressed forms in a final double consonant group with hard s as the last sound are also stems, as in balance, instance, etc., also when the vowel is strong as in climax, etc. But it must be considered that the phonetic difference between instance and instants is very small; the same may perhaps be said of the final syllables of the inflectional forms adopts and adapts when compared to lapse or copse. Some remarks must now be made on the final triple groups.

Stems in consonant groups have been treated in ch. 2 as far as the stems of one syllable are concerned; for those of two syllables, see ch. 3. The stems in a group with a sibilant for its last sound, such as tense, do not concern us here, for we are only dealing with the suffix -z or -s at present. Of the groups with vowellikes as the first element of the group there remain, consequently, -ld, -lv, -lm, -lp, -lk, -lt, -lf, -lp; and -mp, -mf, -nd, -nt, -np, -ŋk. Speaking theoretically, it would seem that stems in a double consonant group would produce a triple one when inflectional -s or -z was added; but this is not in all cases the fact. Thus, a word like ground when made plural becomes a form in -nz rather than in -ndz, although the transcription [graundz] is phonetically to be justified, because the d, if physiologically not to be identified, is present to the hearer and speaker by slight lengthening of the -n-. For our purpose, therefore, we shall treat such groups as triple, whatever experiments in the physiological laboratory may show. The case for the triple character of the final groups in halts and holds is stronger, which need not be elaborated here. It has been shown, in the second chapter, that triple groups in stems of one syllable are unknown, apart from the unique word text, and the same applies to words of two syllables. It follows that

wordforms in triple consonant groups all bear the mark of inflection, such as colds, shelves, films, helps, sulks, salts, gulfs, healths, mumps, nymphs, bounds, hunts, plinths, etc. One group must be excepted: a stem in -*ŋk* produces a final group -*ŋs* rather than -*ŋks*, as has been explained on p. 45; such a form as *winks*, therefore, does not differ from a stem like *minx* in the point that we are considering here. Of course, the stems in -*ŋs* are limited to two, *minx* and *sphinx*, so that the observation has no real importance for the structure of English words. It has already been shown that final groups of stops and opens are limited in kind and in number; the groups -*pt* and -*kt* form triple groups with -*s*, as in *crypts* and *facts*. The same applies to -*ft* and -*st*, as in *grafts*, and *fasts*. The double groups of opens with stops are more numerous in stems, and consequently in triple inflectional forms with -*s*, as in *gasps*, *grasps*, *lisps*, *wasps*, or *wasp's*, *asks*, *discs*, *desks*, *tusks*, etc.

Some additional remarks may be made on dissyllabic stems, although a few words of that type have been already mentioned. Of the single final consonants the inflectional sibilant produces double groups in -*fs*: *mastiffs*, *sherriffs*, *plaintiffs*, *pontiffs*; also -*ps*, as in (he) *gossips*, *worships*, *gallops*, and in the plural *turnips*. Soft final double groups occur more rarely: *natives*, *alcoves*, *lizards*, *methods*, *nomads*, *ballads*, *salads*; *cherubs*, and in *suburbs* and *records*, both with strong vowels in the final syllable. Triple groups are instanced by *adopts*, *adapts*, *consults*, *corrupts*; also with initial strong stress: *peasants*, *servants*, *harvests*, *tempests*, *damasks*, *collects* (*prayers*), *convicts*, etc. As stems in three final consonants are practically non-existent, we may add that quadruple final inflectional groups are also limited to such learned words as *texts* and the connected words *contexts* and *pretexts*.

The second of the suffixes that we must deal with is the dental one in verbal forms, such as *stayed*, *robbed*, *ripped*, *waded*; we need not here deal with the derivatives

like booted and spurred, but they are phonetically of the same type. The suffix has a triple form like the sibilantic suffix in nouns and verbs, and we shall treat of the soft -d first, in the same way as we began with -z in the former case, and for the same reason. For it is evident that the soft -d is the fundamental form of the suffix; it is shown here, too, by the use of -d when stems end in a vowel or diphthong, as in stayed; there is no phonetic reason why -t should not be used, as is shown by state. As in the former case we can say that any word in -d with free contact may be inflectional or a stem, as is shown by the homonyms wade and weighed. As the existence of homonyms is of some importance for the immediate intelligibility of a language, it may not be superfluous to enumerate the homonyms that I have observed, arranging them according to their syllabic sound, and taking the free vowels before the half-diphthongs, and these before the full diphthongs: bard and barred; herd and heard; board and bored, hoard and whored, cord and cawed, ward and warred, sword and sawed; feed and the preterite feed (from to fee); rude and rued, brood and brewed, mood and mooed (the cow mooed to its calf); lade and laid, raid and rayed, grade and greyed, suède (gloves) and swayed; ode and owed, road and rowed, toad and towed, mode and mowed, load and lowed; side and sighed, pride and pried. Stems with a murmur-diphthong occupy a special place, as in the case of the words in -z; there is only one word with a murmur-diphthong and final -d, viz. beard, and there is no homonymous verbal form, even though the New English Dictionary declares that there is a verb to beer, for it only illustrates this imaginary verb by the form in -ing, forgetting that a verbal -ing is no proof of a corresponding verb, as need not be argued here. Words with a murmur-diphthong, consequently, and final -d are invariably inflected forms, like scared, feared, etc. Of course, it might be argued that words like bored and warred are spoken with a

murmur-diphthong, and this is in accordance with the transcriptions of Sweet; in that case some of the homonyms enumerated above might be cancelled, but the difference is in any case so small that an ordinary hearer is not likely to perceive it.

We next turn to the words with a checked vowel before final -d; here the parallelism with the words in -z also exists: words in -d with a checked vowel are indeed generally stems, as rod, stud, bad, kid, good, bed, but there are some words of the type that are best classed as inflectional: the preterites, could, should, would ¹⁾, had and did. Of course, the inflectional character of these words is arguable, for they differ from other inflectional forms in many points, both syntactically and phonetically. As to the first point, which only indirectly concerns us here, it must be considered that apart from had, they are preterites only, whereas the other inflectional forms in -d also serve as non-finite forms, i. e. as perfect participles. But there is a phonetic point that seems to me of greater importance: the words occur indeed as strong-stressed forms, but the only ones that really do so frequently are did and had, especially did, whereas the others are primarily weak-stressed. And this is of importance when we wish to explain why these verbal forms produce extra-close groups with a plain verb stem, the other verbs taking the verb stem with to, even when they only serve to modify the meaning of the verb stem, as in He happened to hear it; on this point, see *English Grammar* ⁶, § 257. Such preterites as stood, fed, etc., need not be mentioned here, for the -d forms part of the verbal stem, is in no way a suffix.

Words in -l, when a suffix -d is added, form a final group -ld that occurs in stems; but something is to be said about that. For the number of verb stems in -ld with checked vowels is limited to three: to weld, to gild,

¹⁾ The preterite would is a homonym of the noun wood.

and to build ¹⁾); and even in syllables with free contact the number of possibilities is limited, for final -ld never occurs in stems except in the types enumerated in ch. 2, i. e. with the syllabic sounds of bald, field, old, and mild. The consequence is that any word in -ld with the checked vowels that occur in lolled, pulled, sculled, and with the free vowels or diphthongs in fooled, hailed, scowled, and toiled must be inflectional. The number of stems in -nd is also limited, it never occurs in syllables with the free vowels or diphthongs of dawned, feigned, stoned, and joined. Stems in -md and -nd do not occur at all, so that forms like hemmed, winged are necessarily inflectional. Some homonyms may be mentioned in these groups of forms: build and billed, world and whirled, bald and balled, gold and goaled; find and fined, mind and mined, to wind and whined.

Words in a soft stop or open produce groups with final -d that are exclusively found in inflectional forms, as in robbed, begged; saved, breathed, buzzed. As has been shown in chapter II., the number of final soft groups is small apart from those treated here, and the result is that there are even fewer cases of triple groups with final -d; of this type we find -lvd in shelved, -lmd in filmed, and no others. Of the stems in a triple group we only find those in -ld₃ or rather -l₃, as in bulge, which produces the practically triple group in bulged. A similar observation may be made on range, lounge, tinge, swinge, etc., when inflectional -d is added to them. Dissyllabic stems mostly end in a vowel, and these do not differ from those of one syllable: pitied, bellowed, etc. Dissyllabic stems with initial stress and a final soft consonant are rare, and agree with the stems of one syllable, as in humbugged, ruined, and perhaps a few others. Dissyllabic stems with final stress agree with those of one syllable, as in compelled, convened, expunged, infringed, etc.

¹⁾ The only other stem in [-ild] is the substantive guild.

The hard form of the suffix of the preterite and perfect participle primarily depends for its occurrence on the hard final consonant of the stem, which may end in a hard stop or a hard open, i. e. -p, -k; -f, -s, -ʃ, as in stopped, looked; laughed, kissed, wished. As there are no verbs in hard -p, there are no preterites or perfect participles in hard -pt; but the group occurs all the same, for it is used in derivatives from nouns, as in quick-breathed, and in the phonetic term breathed, proposed by Sweet as an alternative to the attributive noun breath, so that he uses breath sounds as well as breathed sounds, but in predicative use has breathed only: the consonants are breathed. As this point has sometimes been misunderstood, and the term has been mistaken for the participle breathed [briðd], I take the opportunity to refer the reader who might wish to consider this question, which is really not a question at all, to an article that I contributed to the *Maître Phonétique* of April 1934. In contrast to the stems in a soft consonant or consonant group nothing has been said here about contact in the syllables with final -t; but there is an observation to make on the subject all the same. It is true that we find -t in stems with free as well as close contact, for which very few examples will suffice: hoped, ached; chafed, leased, leashed show examples of free contact; stopped, checked; sniffed, kissed, tossed, hushed, and pushed show examples of close contact. But this is not all; there are some verbs that have a stem in a soft consonant or consonant group and hard -t for their suffix all the same, as in send and sent, gild and gilt, dwell and dwelt, spill and spilt, spoil and spoilt, gird and girt, burn and burnt. In some cases the stem has free contact and a soft final consonant whereas the preterite has close contact and -t, as in deal and dealt, feel and felt; sometimes the final consonant of the stem varies, too, as in cleave and cleft, leave and left, lose and lost. In some cases the final consonant of the stem is the same in both forms, except for the alternation of the syllabic

elements, as in leap and leapt, weep and wept, etc. The lists of these verbs are given in any grammar, so that it is only necessary here to point out the phonetic significance of the phenomenon.

The suffix -t also occurs in stems that end in a consonant group; these groups are -lp, -lk, -ls, as in helped, sulked, waltzed; also -ns and -nf, as in danced, launched. Of the opens with a stop we find verb stems in -sk, -sp, -ks, -ps, as in masked, grasped, taxed, lapsed; also -tf, as in perched, etched, sketched. It seems unnecessary to multiply examples, as they are not rare. Among the groups we must also mention -mst, as in glimpsed; it might be supposed to be a quadruple group -mpst; see ch. 2.

In stems of two syllables with initial stress a final hard consonant is not so rare as a soft one, so that double groups in a hard -t occur, as in gossiped, worshipped, galloped, but hardly any others. On the reason why we write gossiped but worshipped, see *Introduction* ⁷, p. 218. There are also some stems in weak-stressed -s and -f, as are instanced by focussed, punished, finished, etc. Dissyllabic stems that have final stress are treated in the same way as stems of one syllable, as is shown by distressed, eloped, approached.

One form of the suffixes treated must still be dealt with: the syllabic one with the vowel *i*, so that the forms are -iz and -id, as in roses, urges, misses, rushes; waded, waited, etc. Dissyllabic stems in -iz do not exist, so that the dissyllabic forms are clearly characterized as inflectional; the only stems are series and species, which are probably quite as often pronounced with -iz, and have no distinction of number for their form suggests a plural as much as a singular, because they had such a plural in Latin. Words of two syllables in weak-stressed -id may be stems, as in vivid, and the other words enumerated in ch. 2, but many of them are apt to be looked upon as inflectional, even if no stem without -id exists, as crooked, rugged, and similar words. We may conclude that the words in -iz

and -id are in most cases unmistakably inflectional, and, speaking more generally, that the suffixes -z and -d, with their variants -s, -t, iz, id, characterize most words as inflectional. This is important when we weigh the question whether English is still to be looked upon as an inflectional language.

The third suffix that may in some respects at least be looked upon as inflectional is -ing in verbal forms, i. e. forms that suggest a connection with a verbal system. Its syntactical character need not be discussed here, as the reader may consult my *Handbook* ⁵, where its uses are full treated, on p. 55—127, and its uses are compared with those of the plain verb stem (infinitive) and the stem with to, p. 248—277, and also with other verbals, p. 278 to 282, together with a chapter on aspect in English and other languages on p. 221—237. It may be sufficient to state here that other languages have no corresponding form, and that all attempts to twist its uses in such a way as to resemble the traditional parts of speech, whether by a division into two forms, the gerund and the present participle, or into three, the gerund, present participle and the verbal noun, fail to give a satisfactory account of its function in living English, and above all fail to explain its place in English in comparison to the competing forms that have been mentioned. Some additional remarks, also from a phonetic point of view, have been made in the sixth edition of my *English Grammar*, published in 1941. Words of one syllable naturally become dissyllabic when the suffix -ing is added; those of two syllables become trisyllabic. It must be specially pointed out, although the fact is well enough known, that stems in a potential -r also become one syllable longer, the -r- appearing in the form, as in entering. It is an indication that we were justified in keeping the words in potential -r apart from those with a final syllabic sound in the earlier chapters of this book, as indeed also in former works, confirmed in this respect by Sweet's Glossary to the Elementarbuch,

although I did not notice this till afterwards. That a word in a murmur-vowel, without a potential -r, *can* take the ending -ing, is shown by the actual existence of the term *quotaing*, formed from the converted verb to *quota*, although it is naturally a technical term, if by no means an unusual one in the days that preceded the present war. It has already been observed that it is not a matter of course that the suffix should invariably increase the number of syllables, as in earlier English we find such spellings as *cryng* for *crying*, which have been cited in ch. 1 (p. 9). Some examples may be added, though they may be hardly necessary: adding, coming, seeing, etc.; of stems of two syllables: distilling, condemning, inventing, persuading, etc., and carrying, bellowing, etc., with the strongest stress on the initial syllable, all forms of three syllables; but also longer words, such as contradicting, intervening, distinguishing, complimenting, of four syllables; actualizing, appropriating, associating, congratulating, experimenting, reverberating, exaggerating, etc., of five syllables; particularizing, reorganizing, Americanizing, etc. All these words are in ordinary use, and there may be even longer words that do not disturb any English speaker. It may be noticed, however, that the longer words tend to have a somewhat stronger stress on the syllable preceding the suffix, and this has been suggested, in my *Introduction*⁷, § 179, as the cause why verbs in -ate are pronounced with weak-stressed -ert, whereas the nouns and adjectives end in weak -it, as is shown by the pairs to separate and a separate entrance, to graduate and a graduate, etc. A similar difference has been pointed out l. c. in the verb to prophesy [prɒfəsai] and the noun prophecy [prɒfəsi], and the verbs and nouns in -ment. That words in -ing are almost necessarily interpreted by English speakers as formed with the suffix, has already been mentioned in ch. 1.

The three inflectional suffixes that living English possesses having been disposed of, we can now deal with

the derivative ones. One, indeed, has already been mentioned in passing, the adjectival suffix *-ed*, as in *quick-breathed*, on p. 96, because it cannot always be strictly distinguished from the inflectional suffix *-ed* in verbal forms. In the following cases we have participles: *roofed* and *floored*, because the nouns have been 'converted' into verbs, and then produced the forms: This cellar must be *roofed* and *floored*. Archdeacon Grantley in Trollope's novel *Barchester Towers*, which I quote from memory. As to its three forms, the suffix needs no phonetic comment after what has been said on the verbal suffix *-ed*, and for this reason it is enough to supply a small number of examples illustrating its three forms: *spurred*, *diseased*; an *oilclothed* ¹⁾ table; *talented*, *booted*, etc. The suffix is not rare in new-formations, sometimes with the evident character of a *nonce-word*, which may be illustrated by some examples, in addition to one or two in *Handbook* ⁵, § 1688: Mr. Smith conducted them through his garden to his *verandahed* house. Rose Macaulay, *Orphan Island*, ch. 6, p. 63.—Its five upper windows faced far eastwards towards the weather-cocked tower of a village which rambled down the steep inclination of a hill. W. de la Mare, in *Albatross Book of Short Stories*, p. 63. As shown by the quotations in the *Handbook* and here, the suffix is frequent in word-groups, as is also instanced by these cases: a *marble-topped washstand*, her *gold-coloured hair*.

Among the purely derivative suffixes that do not affect the number of syllables of the new word is hard *-th*, used to form abstract nouns, chiefly from adjectives, although the connection is not always quite evident on account of some vowel-alternation; but the difference is rarely such that the connection of the two words, the stem and the derivative in *-th*, is doubtful to a speaker of present-day English. Examples are *warmth*, *length*, *width*, *depth*, *strength*; the number is limited because

¹⁾ ['oil'klɒpt].

it is hardly a productive suffix, the forms in -ness competing with it. Several of these nouns take the plural suffix, so that the word ends in hard -s, as in breadths, widths, lengths, strengths; of course, these words are phonetically marked as inflectional in the singular as well as the plural, for stems in a consonant group with -p for its last element do not occur. The suffix -p is also used to form ordinals, as in fifth, eighth [ɛtɪp], hundredth, also with nasals, as in tenth, seventh, etc., and in nth, also written nth, and in nonce-words, such as halfdozenth (see *Handbook* ⁵, § 1708). All these double final groups are characteristic of derived words, stems never ending in them, and inflected words never taking -p, since the suffix has become obsolete in the third person of the present tense of verbs (he hath). On health and wealth, see ch. 2. There are also triple final groups in -p: -lɪp in twelfth, -ndɪp in thousandth. As to the ordinal from six it may be observed that the group -ksɪp is too difficult for practical life, so that Sweet in his *Primer of Spoken English* gives [sɪks] as an alternative. But I believe that the form [sɪkp] is also really used, and has the advantage of indicating the function of the word. The plural sixths is most naturally [sɪkps]. The other groups are correctly indicated by the usual spelling: fifths, eighths [ɛtɪps], hundredths, tenths, sevenths, and the quadruple groups in twelfths, thousandths. The existence of these groups, in spite of their undoubted difficulty, to English speakers, too, is to be looked for solely in their function; for a comparatively simple group as in months is often made into [mʌns], although it is naturally 'disapproved of' by purists, and cannot be said to be in general use, any more than the familiar [klouz] often written (old) clo's, and supposed to be restricted to vulgar English. The tens take the suffix -ɪp, and it is usual to consider this as a bye-form of the other non-syllabic suffix in seventh, etc.: twentieth [twenti-ɪp], etc. But it is not quite clear why there should be such a secondary form at all, even if dissyllabic words in a weak-

stressed syllable ending in *-þ* do not exist. In any case, it should be noted that the double form of the numeral suffix makes it different from the inflectional *-d* and *-z*, which are syllabic only when a stem ends in the same consonant. And it cannot be said that the fundamental form of the suffix of the numerals is *-ip*, for we find the single *-þ* after the potential *-r* of fourth, in contrast to such a form as entering or boring. Groups of two weak-stressed identical vowels do not occur in stems, although they are not rare in derivatives, such as copyist. The historian of the English language will tell us that the two forms of the suffix of the ordinals were 'originally' one, and that the non-syllabic one is a shortening of the syllabic form, but that is naturally no help when it comes to answering the question what is the state of things in living English; here it is impossible to look upon the two forms, *-ip* and *-þ*, as independent suffixes, but the reason why *-ip* is used for the twenties, thirties, etc., would seem to require a further explanation than the fact that English words hardly ever end in weak-stressed *-th*, such as the foreign word *mammouth*, which shows, after all, that the form is not impossible ¹⁾).

The number of non-syllabic derivative suffixes, as we have seen, is small, and it has been shown to be doubtful if *-th* in ordinals belongs to the group. The next group are the syllabic suffixes, whether of one or more syllables, and we shall begin with those that have an initial syllabic sound, such as *-able* or *-ible*, *-ist*, *-ize*, *-itis*, etc. Many of the suffixes are of one syllable, and besides the ones mentioned the only suffix of two syllables that begins with a syllabic sound is *-ation* (botheration), unless we add the somewhat learned suffix *-iana* (Boswelliana). There is another dissyllabic suffix that might possibly occur to a reader: *-ity*, as in impossibility, but this is never used in new-formations, as pointed out in *Handbook* ⁵, § 1654,

¹⁾ *-ip* is probably a spelling-pronunciation taught in the schools; see ch. 7.

where all the other suffixes are also treated, in the chapter on Word-formation. Words in a strong-stressed vowel take the suffix, thus producing words with two successive identical vowels, one of which is strong-stressed, as in Jewess, archaic, nogoism (*Handbook* ⁵, § 1643), clayey, gluey (ib. p. 1705), also with the strong stress on the suffix, as in payee (*Handbook* ⁵, § 1655), etc. But two weak-stressed successive vowels are also common: copyist, babyish, also with medium stress on the suffix, as in the nonce-word ninetyites (*Handbook* ⁵, § 1674). Examples need not be multiplied because the reader can find them in the chapter on Word-formation in the Handbook. Words with potential -r always show this consonant before these suffixes, as in pauperize, secularize, purism, Shakespeariana, nectarine, barbarism, purism, referee, mountaineer, bearer, peeress, authoress, cellaret, adorable, etc. One of them may be specially mentioned, because the spelling is apt to mislead a foreign reader: acreage is [eikəridʒ]. Of course, derivatives with the suffixes -ing and agent-nouns in -ing are very common, and one or two have been mentioned above. It has already been noticed, in ch. 1, that words in the velar nasal retain the single nasal in derivatives in -ing, -ish, and -er, as in singer, singing, youngish; but we have a medial group of nasal with back stop in stronger, strongest, younger, youngest, longer, longest, as also in the derivative diphthongize. The comparatives with a medial consonant group may be contrasted with the apparently similar forms cunninger and cunningest, which have a single medial nasal only; the reason for the difference may be that in the derivatives from cunning the medial sound occurs in a weak-stressed syllable, whereas in stronger, etc., the syllable is strong-stressed, and that means at the same time that it has close contact here. It must also be mentioned that some stems in a weak-stressed vowel insert a consonant when a suffix with a syllabic beginning is added: anathemize, pygmytize, tobacconist, dramatist, egotist, egotism, etc. The -t- is

borrowed from the Greek words in -ize, like dramatize, in pygmytize, possibly in egotism and egotist for a similar reason; as to the -n- of tobacconist, it may be due to Greek words, but Platonist, the prototype suggested by the New English Dictionary, is hardly so likely as a much commoner word like antagonist, or even protagonist. Words in weak-stressed -y, such as Trotzky, take the suffix -ist: Trotzkyist, like copyist, although such foreign words naturally have no strong hold on people's memories, so that we need not be surprised to find a note on 'the struggle between the Trotskists and the Stalinites' in the Daily News of 1927 (quoted in the New English Dictionary). The words of the type copyist may be compared with the ordinals like twentieth, but it has already been shown that the difference is that the ordinals have a non-syllabic type of suffix as well.

The derivative suffixes with a syllabic beginning do not much change the phonetic character of the words formed with them, except that they make them one or more syllables longer; thus, there is no shifting of accent in the derivative, such as is common in Dutch, except in the words with the suffix -ic, which is not very productive. On this point I need only refer to *Introduction* ⁷, p. 83 f., where the other non-productive suffixes are also illustrated with regard to this point, such as -ity (impossible, impossibility), and the suffixes that approach the character of independent words, such as -graphy, -logy, and -meter.

The last group of derivative suffixes are those with a non-syllabic beginning, such as -dom (earldom), -ment (abridgement), -ness (goodness), -ling (duckling), -ly (beastly), etc. An intermediate case may be mentioned first: the suffix -hood, which forms derivatives that retain their independent form, as in falsehood, hardihood, nationhood, etc. Potential -r- does not appear, as in beggarhood, flapperhood (*Handbook* ⁵, § 1638); this also applies to the derivative neighbourhood [nerbøhud], but the word is sometimes [nerbørud], no doubt because the association

with the stem is broken. The absence of this association primarily causes the stress on the suffix to be weaker, and the effect of this is that the aspirate does not appear. The other suffixes of this group mostly begin with a vowel-like or a semivowel (as in -ward, and the suffix -yer, as in lawyer, although this is not a living suffix), never with two non-syllabic sounds, apart from the infrequent suffix -ster. The result is that there occurs no heaping of consonants in the middle of English derivatives, and that most of the medial groups that occur are of the type that has a vowel-like for its second element, i. e. the very kind of groups that are commonest in stems as well. No detailed treatment of the groups in derivatives seems called for here, but some observations will be made on the instances that have been selected to show their general character. To begin with, some examples will be given of the principal suffixes, and of those that require some brief comment: dukedom, freedom, wisdom, newspaperdom, handful, childhood, widowhood, abridgement, accomplishment, treatment, kindness, darkness, watertightness, friendship, punster, trickster, youngster and oldster (nonce-word), dukelet, princeling, lordling, birdling, fruitful, sleepless, dauntless, knightly, wholesome, hardly, sweetly, kindly, instantly. This list claims to be pretty well exhaustive of all the suffixes in ordinary use, and examples will be found in the Handbook, as usual, also of other instructive nonce-words beside the few quoted, for nonce-words are above all living forms. It will be apparent that no difficult consonant groups arise, for it must be remembered that in medial consonant groups the members always separate into two, one or two belonging to the first syllable, the remaining one (or ones) to the second, as in duke-dom, abridge-ment, trick-ster, etc. There are two groups that might give rise to more complicated medial consonant groups, viz. the suffixes -ly and -ness, for they form derivatives from derivatives in -d or -t, such as involved, supposed, fixed, etc. But strong-stressed final syllables

in consonant groups do not take the suffix -d or -t but have syllabic -id, so that involvedly is [-in'vɒlvidlɪ], and involvedness is [-in'vɒlvidnɪs], and the same applies to the other words, as has been pointed out in *Handbook* ⁵, §§ 1649 and 1712. Weak-stressed words of this type have no triple groups, and all have the stem in -d or -t, as in determinedly, embarrassedly, distinguishedly, as has been pointed out in the same places. It has also been explained there that words in a strong syllable ending in -n have a double -nn- when ness is added; on this point the first volume of the *Handbook* ⁴ on p. 114 may be consulted, to which it may be added that such cases are rare because the suffix, even though beginning with a consonant, is generally not strong enough stressed, so that the only other suffix that ever occurs with a double medial consonant is -ly, as in solely, and dully, especially in the first word, with free contact. But such a word as wholly is so familiar that the unusual double group is likely to be used by some speakers only. There is little assimilation of voice or place in these derivatives, although such words as dukedom might seem to require it, a combination of two stops, hard and the other soft, does not occur in stems, for words like width and breadth are also derivatives rather than stems, and here there is often some assimilation of force, if not of voice. On the causes why assimilation is so rare in English in these cases, at least in educated English, I have dwelt in my lecture on the relationship between language and culture in English, and in related languages, *Taal en Maatschappij*. Some remarks on the twofold form of the suffix in bigotry and slavery are made in *Handbook* ⁵, § 1650 f., which it would be useless to repeat here; nor does it seem necessary to do more than point out the assimilation in the medial groups such as varletry, in contrast to the compounds like foot-race, state-room, outrun, etc. See p. 115. I may finally point out that the suffix -en in verbs, such as to harden, to stiffen, to moisten, etc., has not been treated here, for it only adds a

syllabic sound to the stem, apart from such evident assimilations as in *moisten*, where *-t-* is apt to disappear.

The preceding pages have shown that derived words differ in their phonetic aspect from simple words, whether inflected or stems, and not in the number of their syllables only. This is still more clearly the case in English compounds, which show a considerable number of medial consonant groups, which it would be impossible, and unnecessary, to enumerate exhaustively. A treatment of this phenomenon is important, however, because it supplies the key to the problem of the character of English compounds, and the answer to the question why English so frequently resorts to word-groups rather than to compounds in the proper sense of the term. It is well-known that English in the use of word-groups does not shrink from monstrosities that are comparable to the worst of what Germans themselves call their '*Wortschlangen*', of which the following genuine English case may be a sufficient example, although the proverb *ex uno disce omnes* does not apply here; it is an example quoted in the *Handbook* ⁵, § 1900: the Rock Point Life Insurance Company building fire escape. But such monsters are not any more 'words' of daily use in English than the similar ones in German, and do not really teach us anything about the structure of either language. The point to remember is that English uses compounds in a very limited degree, and word-groups very freely. Here we must treat of the compounds and their phonetic form, and that means chiefly their form in the middle, where the two elements are joined. For the beginning of compounds is the same as that of the beginning of stems, and the end agrees with the end of stems or of their inflected forms. The first element of a compound may end in a syllabic sound, in a single consonant, or in a consonant group, as has been explained in the chapters on stems of one and two syllables. And something similar may be said of the beginning of the second element, so that we now turn to the question what

are the groups that are thus formed, remembering that the word 'group' has not the same meaning here as in simple words, in so far that in compounds the groups of consonants always break up into two parts, belonging to two successive syllables.

Combinations of two vowels in two even-stressed syllables do not often occur medially, as in two-edged; they are more frequent when the first element is a prefix, as in co-opt, coeducation, co-heir, and similar words mentioned in *Handbook* ⁵, § 1599, where other cases of composition with prefixes ending in a vowel will be found illustrated. The other prefixes end in a single consonant only, and do not give rise to medial groups that require mention here; the only prefix in a consonant group is post- and this will be treated with the other compounds, in the narrower sense of the term, below. The prefixes be- and a-, as in befriend and alike, do not produce compounds but derivatives only; the distinction is of no importance here, and the reader may consult the *Handbook* on the use of the first prefix. As to alike, alive, etc., the character of these words is doubtful, for they are certainly felt to be closely connected with like and live [laiv], or at least life; in Trnka's lists they have been omitted, probably on purpose, because he treated of stems only; but some observations have been made on this type of words in the chapter on dissyllables with final stress, and they have at any rate helped to make English speakers familiar with such words as arrest and amend, from which they are not separated in the linguistic picture of his language that a speaker forms in his mind. It is also unnecessary to dwell on the compounds with a first element that ends in a vowel or a second that begins with them, as in hawthorn, go-between, old-established, man-eaters (lions), or with a first element that ends in a syllabic vowel-like, as middle-aged, slander-monger, buttonhole. Similar are the compounds with an aspirate at the beginning of their second element, as in eyehole, faith-healing

book-hunting, outhouse, uphill, offhand, etc. In Sweet's transcriptions we find hedgehog transcribed [hedʒog] (Primer p. 55), but it is not a compound, although the spelling suggests it, and the New English Dictionary holds that the word is ['hedʒ'hog]; little importance need be attached to this, for the indications of the current pronunciation of words is not the strong point of this Dictionary. The reader may compare what has been observed on the derivative word neighbourhood on p. 61 ¹⁾. If shepherd is always pronounced [ʃepəd], this shows that the word is in no way connected with either sheep or herd in living English; and this is only what was to be expected, for the vowel of the first syllable might not make a connection with sheep impossible, but the meaning of the word has changed, as a result of the disappearance of the word here, and its compounds cowherd, goatherd, and swineherd, and this is shown by the figurative use of the word in the psalms (The Lord is my shepherd). The word herd itself is so much forgotten, even by educated readers, in its personal meaning (of course the word in the meaning 'flock' is perfectly alive), that Trevelyan in his History of England, p. 90, finds it necessary to explain it: The later English custom of leaving sheep and oxen to graze without a herd or watcher present, was remarked on by foreign visitors.—

After these preliminary remarks it is time to turn to the combinations of non-syllabic sounds to which compounds give rise in the middle, in what Germans conveniently call the 'Kompositionsfluge', for which we might use the translation composition-joint, but we may perhaps manage without a special term. In speaking of this subject it must be understood that we shall not attempt rigidly to distinguish between the combinations of consonants in the narrower sense of the term, i. e. stops and opens, and the vowellikes and semivowels. A

¹⁾ The reader will find an observation on the aspirate in weak-stressed syllables in chapter V. on form-words, p. 126.

complete analysis of all the groups to which composition gives rise in English might find it necessary to do so, but it seems better to me not to overwhelm the reader with the mass of evidence that such a complete analysis would bring with it, and to restrict myself to the remarks that my less systematic observation of the phonetic aspect of compounds has resulted in. The reader is warned at any rate that more may be expected from further study of the subject. In the first place it may be observed that composition produces medial combinations of the consonant groups that are found at the end of stems with those that are found at the beginning of stems. The number of elements, in the middle of compounds, consequently, may theoretically amount to six, for there are stems that end in three consonants (text, context, pretext) and there are words that begin with three, and these are common enough: street, spray, etc. This is not all, for it occurs that the first element of what may be looked upon as a compound is inflected, as in wasp's nest, perhaps even in clotheshorse. The words that are formed in this way may perhaps be rather called word-groups, on which some observations will be made in chapter V., but only as far as the elements of word-groups are concerned, for it is evident that the phonetic study of word-groups as such forms an indispensable basis of syntax, although this has not yet been generally recognized by writers on syntax. A complete study of word-groups from a phonetic point of view is much to be desired, especially with a view to their satisfactory treatment in syntax; some casual observations have been made on such groups as to come sailing, and the groups with an indefinite case with plain verb stem (I saw him go) as contrasted with those that take an indefinite case with verb stem with to (I hated him to talk like that) in the *Handbook* and in the *English Grammar*, which show that we must chiefly rely on such a phonetic study for the explanation of what seems otherwise arbitrary. One case may be added here

as it may help to convince the reader: we say a wasp's nest, but we never combine this genitive with the noun sting, for which we have the group: the sting of a wasp. It seems to me quite evident that the latter words are not combined in a genitive group because the combination of final -sps and initial st- would be impossible for an English speaker. But we shall only treat systematically of the compounds that have a stem for their first element; these are the large majority in any case, and find their proper place here. The resulting groups of consonants may be studied in the order that is suggested by the preceding remarks, and we may ask in the first place what samples there are of the maximum number of non-syllabic sounds that we have declared to be possible on theoretical grounds. As the number of words in three non-syllabic sounds is practically one, text and its compounds or derivatives, the answer is easy: there are none of six intermediate non-syllabic sounds; the only compound that is formed with text is textbook, and in this word the stop -t- runs a chance of not being audible, although speakers who use this somewhat learned word no doubt attempt to speak it, and their hearers are equally certain to have the impression that they hear it: we may say, therefore, that the word has a quadruple medial consonantal group, and shall continue to say so even if the laboratory should prove that there is no medial -t- to be observed. It is not an accident, I believe, that English has no compound of text with criticism, although the idea expressed by the Dutch word *tekstkritiek* is well enough known, and expressed in English by 'textual criticism'. It shows that English does not make compounds with groups that are not distinguishable, for it is well-known to students of living English that assimilation is restricted to a narrow field in educated English, far narrower than in Dutch and German; on this point the reader may consult the *Handbook I* ⁴, § 238 ff. Although text does not form a medial group of six or 'only' five consonants, it would be

possible for a group of five consonants to be formed by a double final group with a triple initial one; are there such? The number must be small in any case, for the only initial triple groups are *skw-*, *spl-*, *spr-*, *skr-*, *str-*; the combination of these with final groups of a vowel-like with a stop, such as *-nd*, is not impossible on the face of it, whereas we cannot expect the triple groups to be combined with final *-st*, etc., and still less with those that end in *-s*, such as occur in *lapse*, *tax*, etc. Such a compound as *handspray* would be possible, but I find, on turning to the dictionary that doctors use the term *handball spray*, and have not found any examples of these quintuple groups. Even if some reader should discover cases of them, we may feel assured that they are rare, and consequently of little importance in the structure of English words. The quadruple groups are far more common in English compounds, and there can be no question of enumerating them, or giving the most frequent groups only, but we will give some samples that may show their general phonetic character: *bandstand*, *handbreadth*, *goldsmith*, *wax-cloth*, in all of which the medial group naturally divides itself into two pairs. Special mention may perhaps be made of the groups of final *-tʃ* and *-dʒ* with another double group, such as occur in *hedge-priest*, *hedge-sparrow*, *siege-train*; also of the compounds with the prefix *ex-*, as in *ex-professor*, *ex-president*, *ex-prime Minister*. It may also occur that the first element ends in a single consonant and the second begins with a triple group, as in *rood-screen*, *woodscrew*, *typescript*, *bedspread*, *bedstraw* (a plant), *upstrokes* and *downstrokes* of a letter, *moonstruck*, *panic-stricken*; also in a word of a different type that might suggest a quintuple group: *postscript* [*pouskript*]. The analysis of the last word into syllables is not quite simple, for medial *-s-* is not doubled in this word in ordinary speech; it differs in this respect from a word like *class-struggle*, which is properly written with a hyphen to suggest the long *-s-*, or *horse-stealing*, which is transcribed with *-sst-* by Sweet,

Sp. Engl. p. 93 l. 2. The difference between postscript and class-struggle is that the first is really a simple word ¹⁾, not a compound at all, in spite of the fact that post- is a very common prefix in living English, and gives rise to compounds with quadruple groups, as in post-Christian, post-glacial (the post-glacial age), and the grammatical term post-genitive. The reader will observe that the vowel-likes play an important part in the quadruple groups with post- and ex- as well as in the others; indeed, quadruple groups of opens and stops do not occur medially in English any more than in any other position. It might be suggested that a 'word' like washhand stand is an example with a medial group of one vowel-like and three consonants: -nd-st-, but it is clear on examining the case that we have a word-group here, however impossible it may be to draw a clear line between compounds and word-groups. This is not to be wondered at, for a student of Indogermanic languages, where inflection and derivation and composition play such important parts, knows that no rigid line can be drawn between inflection and derivation, between derivation and composition, although the neglect of the systematic study of word-groups has not made it a commonplace to state the same thing with regard to compounds and word-groups. On the latter point the reader will find some observations in my *Handbook* ⁵, § 1581 ff.; in the same volume the word-groups are treated systematically, for the first time in a grammar of living English, if only from a syntactic point of view, and a briefer treatment with some additions will be found in the sixth edition of my *English Grammar* p. 150—198.

The triple medial groups form a much larger class in English, and no attempt will be made here to deal with them exhaustively. As in the longer groups the vowel-likes play an important part, but medial groups of three stops and opens also occur pretty freely. The following words illustrate medial groups with one or two semivowels or

¹⁾ Consequently it has uneven stress.

vowellikes: milk-white, wax-work, earthquake; handmade, handwriting, sandbag, locksmith, slave-driver, slave-trade, spring-cleaning, half-crown, ash-grub, night-club, grass-plot, wine-glass, horse-cloth, ash-tray, ash-fly, self-seeker, subject-matter, beanstalk, taskmaster, toast-rack, globe-trotter, elsewhere, strange-looking, dish-cloth, house-breaker, etc.; also words with the prefix mal-, as in maltreat. The groups with opens and stops only are not so numerous, for evident reasons, and some examples will be sufficient here as well as in the other cases: wash-stand, blood-stained, upstart, bookstall, footstep, all with initial -st in the second member; but final -st also occurs, as in postcard, paste-board; similarly outspoken, expect, and many other words beginning with ex-, whether to be looked upon as an English prefix or not, night-school, also with -sp and -sk in the first element: wasp-waisted, disk-wheel. The group ks is frequent in the first element of compounds: tax-gatherer, wax-tablet, sexridden, boxcalf, foxbrush, etc.; of course, it does not occur in the second. The group -ps, which is rare in simple words, does not seem to occur in combination with another consonant in compounds at all. There are also groups of stops with tʃ, as in pitch-dark, and with -dʒ, a quadruple or a triple group, as in bridge-drive, bridge-deck, etc. A special kind of triple groups are such as have a first element with a syllabic end, as in tea-strainer, awe-struck, sky-scraper, etc.

The number of compounds with a double medial group is necessarily much larger than with any of the preceding groups, and their enumeration would be still more out of place. Vowellikes and semivowels play an important part here, too, and groups of vowellikes only are by no means uncommon, as in kingmaker, ringleader, penname, fenman, fen-runners, fanlight, steam-navvy; also groups of a vowellike with a semivowel, as in time-work, farmyard, tanyard. Examples with -l- are the following: bell-rope, grillroom, seal-ring, call-money, limelight, whitelead, sheet-lightning. Groups of vowellikes and opens or stops are

also common: jamjar (perhaps a triple group), jampot, dumb-bells, man-servant, inside, hillside, pancake, skin-deep; also with the open or stop in the first element: viceroy, horse-race, hat-rack, piecemeal, mushroom, courtyard, backyard, etc. The resulting groups are all familiar in stems as well, except -sr-; it is also to be noted that the groups of stops with r- in the second element are not identical with the groups in simple words, for in compounds the initial r- is the same as at the beginning of stems, i. e. it is voiced, whereas in the groups pr-, tr-, and kr- it is assimilated to the preceding stop with regard to voice, and even undergoes some further assimilation in the group tr-, on which it is not necessary to dwell here (see p. 106). This last remark also applies to the groups with the prefix post-, as in post-reformation (days), and in word-groups, as in hard-and-fast rules. Voiced medial groups of vowel-likes and consonants that do not occur in stems can be observed in prize-money (prism is no exception, for the m is syllabic here), prize-ring, and others.

Opens and stops with a second element that opens with an aspirate have already been dealt with on p. 108 f. Combinations of opens and stops are frequent, as in bloodshed, upshot, backside, keepsake, bloodsucker, eggshell, etc. Two stops are common, too, and they may be two that differ in voice only: backdoor, lead-pencil, lead-coloured, hatband, meat-cover; and cup-bearer, pet-dog, back-gate, etc. Groups of two opens are not so common, but there are a number of them: pathfarer (on the model of wayfarer), cliff-side, etc. The use of groups of two stops and of two opens that differ in voice only reminds the reader of the small place that assimilation plays in compounds in present-day standard English; on this point, as also on the slight assimilations in such cases as whitethorn, offwheel, etc., see *Handbook I.*⁴, § 230 ff. The cases of identical consonants are not particularly rare: stop-press news; the character of these groups will be dealt with below. Of course, compounds with a single

medial non-syllabic sound occur, too, but their number is limited by the small number of stems that begin or end with a syllabic sound: hawthorn, sea-zone (the three miles sea-zone), a joy-ride, sawdust, a lazy-bones; a buttonhole; a headache, ear-ache. A word must also be said on the medial groups of two syllabic sounds, whether both vowels or diphthongs, or a group of one of these with a vowel-like. The type is instanced by the following words: sea-air, double-edged, bow-oar, but their number seems to be limited to an insignificant number, even when we take into consideration that the number of words that can occur in them at all is small.

Two points finally seem to require a brief mention, because they are characteristic of English compounds: 1. the use of double consonants when the first element ends in the consonant that opens the second, as in mid-day; 2. the use of soft consonant groups in the first element of a compounds that do not occur in stems, as in tradespeople. As to the first kind of group little need be done besides giving some instances: night-time, book-keeper, penknife, bookcase, coat-tails, class-struggle, life forces, and the words with initial n- that take the prefix un, as unnecessary, unnerved, unnatural, etc. As to the second point, it has been shown in the preceding chapters that soft final consonant groups do not occur in stems, whereas they are characteristic of inflected words. The consequence is that such words as tradespeople suggest to modern English speakers that the first element is an inflected form, so that it must either be a genitive, or a plural. When the noun does not denote a person, as in tradespeople, tribesman, almsgiving, clothes-brush, the interpretation as a plural is inevitable, apart from the few cases that a non-personal noun (chiefly one denoting measure) is used in a genitive (a day's work). Of course, in the case of almsgiving and clothesbrush the interpretation is natural enough, but in such a word as tradespeople the plural does not seem to be exactly called for, and this is still more evidently the case in such a word as tribesman, and in

a good many words with the weak-stressed -mən for their second element, no matter whether we look upon this type of words as compounds or as derivatives: salesman, kinsman, spokesman, gownsman, townsman, statesman. In some of these the interpretation of the first element as a genitive might be more or less acceptable from the modern point of view, even if the genitive of non-personal nouns does not exist, speaking of these nouns in general. But such an interpretation hardly seems to represent the linguistic sense of a speaker of the present day in such words as kinsman, spokesman (there is no noun of the type at all), and the idea of a plural word is quite out of the question in many cases, as in the words just mentioned. It is unnecessary to multiply examples, and it seems more important to pay attention to the phenomenon that English in some of these words uses the sibilant as a connecting sound only, a 'composition-joint'. It should be understood that such groups as a nun's dress, a middy's uniform, in his miner's dress, etc., are not to be identified with the compounds just mentioned, for they are evidently word-groups, although the genitive has a function that is quite distinct from the one in my brother's train. I have contrasted the two functions of the genitive of personal (and animal) names as defining (my brother's train) and classifying (in his miner's dress); a complete discussion of these two functions of the genitive will be found in *Handbook* ⁵, § 853 ff., and more briefly in the *English Grammar* ⁶, § 295 f., but the subject clearly belongs to the word-groups, not to compounds.

The reader will probably find it convenient to have the consonant groups that occur in inflected words, not in stems without a suffix, arranged in the following table, and also the final groups that are peculiar to derivatives and the inflected forms of these. It does not seem advisable to attempt a table of medial consonant groups in compounds, all the less because no full treatment of this subject has been offered in the preceding pages.

Final Consonants and Consonant Groups that do not occur in Stems.

I. Single Consonants.

1. -z and -d after murmur-diphthongs.
2. -z in stems of one syllable with close contact (has, does, was, his, is).
3. -z in dissyllabic stems with initial stress (pities, cargoes).

Note. Final -s after vowels and diphthongs occurs in stems only.

II. Double final Consonant Groups.

1. Any soft group of the following types:
-lz, -mz, -nz, -ŋz; -vz, -ðz; -bz, -dz, -gz.
2. -ld in syllables with close contact (see p. 94).
3. -ld in syllables with the syllabic sounds [u, er, au, or].
4. -md, -ŋd.
5. -vd, -ðd; -bd, -gd.
6. -fs, -ps, -pt; -ts.
7. -ps and -ks in monosyllables with free contact.

III. Final Double Groups that occur in Derivatives only.

-ŋp, -pp, -kp, -dp.

IV. Triple Group that occurs in Derivatives only:

-ksp in sixth.

V. Triple Groups do not occur in Stems; the following occur in inflected forms.

1. -lfs; -lpt, -lkt; -lst; -lvz; -lvd, -lzd; -lmz; -lmd.
2. -nts; -nft; -ndz; -nzd.
3. -sps-, -sks-, -sts; -spt, -skt.
4. -pts, -kts; -tft, -dzd.

VI. Triple Groups in Derivatives only.

1. -lps, -ŋps.
2. -pps, -kps; -dps.
3. -ksp in sixth; -kps in sixths.

VII. Quadruple Final Group.

In texts only, and in contexts, pretexts.

V.

Form-Words and Word-Groups

The preceding chapters are an attempt to study the forms of English words in a manner that may with some justice be called systematic, although the reader is no doubt aware that it is not complete, for all stems of more than two syllables have been left unnoticed, unless in the case of inflected, derived, and compound words. The number of stems of three and more syllables is far inferior to that of the shorter words, but they are by no means negligible, for many of them are among the commonest words of the spoken language, such as necessary, impertinent (not thought of as connected with pertinent)¹), extraordinary, etc. A complete study of the structure of English words will evidently have to deal with these words, and a systematic study of them will undoubtedly be profitable. But there is a time for all things, and the present writer believes that he serves the study of the subject best by not undertaking everything at once, and proposes to leave the examination of the stems of more than two words for another opportunity, or for a successor of a younger generation. But there is another class of words that cannot be passed over in silence, even though an exhaustive treatment may remain desirable after the observations that follow here: the words with no clear independent meaning, or without any meaning at all. These have been purposely set aside in the chapters on stems of one syllable and of two syllables, as has been

¹) A member of the House of Commons once declared a speech of a fellow-member 'impertinent', and was consequently called to order by the Speaker. He explained that the word 'impertinent' was not 'unparliamentary', for he had taken it in its 'proper' sense of 'not-pertinent to the matter discussed'; the Speaker felt compelled to accept this 'explanation', amidst the laughter of the members.

mentioned when this seemed to be desirable to prevent misunderstanding. Such words of little or no meaning are mostly of a single syllable, as far as they are syllabic at all, but there are some of two syllables; they are weak-stressed in most circumstances, although contrast may cause them to be strong-stressed like any other word or even syllable. These sort of words have been distinguished by Sweet as form-words (New English Grammar I, p. 22), and the term is perfectly suitable, although it has not been generally adopted, partly perhaps because its importance has not been fully understood, partly because not a few scholars require flamboyant terms, and these were never provided by Sweet. It is not always easy or possible to decide definitively whether a word is a form-word or belongs to what Sweet by way of expressing the contrast has called full words; of course, this difficulty does not surprise any experienced student, for we find it in all departements of the study of language, as need not be elaborated here. One point may be mentioned first of all when we come to study form-words: we must be on our guard not to be misled by the current spelling, which often suggests identity when there is a distinct difference, and a difference when there is identity. Thus, the word *of* may represent [əv], or the murmur-vowel only, as is shown by Sweet's transcription of the sentence on p. 94 of the *Primer of Spoken English*: They all have the manners of men of the world [-ðei ɔl -əv ðə mænəz əv groun -ap :men ə ðə wæld]. What is one word in the current spelling proves to be two in the phonetic representation of the facts. And in such a word or word-group as *ten o'clock* we find the same word *ə* written as *o*'. Similarly the adverb *to*, as in: Pull the door to behind you, is written differently from the adverb of degree in the group: too good; but they are identical in sound. And *to* is a very different word when used before verb stems, as in *to give*, or in words or word-groups, as in *to-day*, *to-morrow*. Of course, it may be doubted whether the syllable [tʊ] or [tə],

as in *to give*, and *to ask*, is a word at all, and should not rather be looked upon as a prefix, as has been shown in *English Grammar* ⁶, in the chapters dealing with the verb stem with this 'word' and without it, but this point concerns syntax rather than phonetics. For the same reason there is no need here to enter upon the question whether *of* is a real word in such a sentence as the following, quoted *Handbook* ⁵, § 1469, in dealing with the word-groups with *of*: *The empire of Morocco* takes its name from *the city Morocco* founded in 1062.

When we study the sentence quoted from Sweet above, it is easy to see that *all*, *manners*, *men*, and *world* are full words. This is less clearly so in the case of *have*, and of *up*, both marked with weak stress by Sweet. The first of these two words may be said to have an independent meaning, something like 'to show'; the other word, *up*, is less clearly of that type, and might rather be looked upon as part of the preceding verb, forming a sort of compound with it. What remains of the sentence is still less of the type of words, at least full words, for they can hardly be said to have an independent meaning at all, though one of them, *they*, has a clear function at any rate; but the rest, if called words, are called by that name for the negative reason that they do not form parts of other words, unless, indeed, a student should observe that *men* and *the world* are preceded by prefixes, or connecting syllables, such as are also found in compounds, as in *tradespeople*, where the medial *-s-* serves exclusively as a connecting link, a composition-joint. Sweet, in the passage in the Grammar that has been mentioned, also distinguishes empty words, i. e. form-words that have no meaning at all; the observation is correct enough, but it seems to produce more difficulties, for the distinction is frequently impossible, and it may be more useful to drop the distinction, although this does not release us from the duty of deciding whether a given form-word has some meaning of its own or not.

The first business in the study of form-words is to collect them, and this has never yet been done in English, or, indeed, in any language, as far as I know. A beginning has been made by Sweet in his *Elementarbuch* and his *Primer of Spoken English*, which is an English edition of the former work, but valuable for its additional texts, because they have the advantage over those of the *Elementarbuch* in that they are mostly connected passages. In the two little books mentioned Sweet gives an identical list of form-words that show two forms, one with strong stress, one with weak stress, thus showing what Sweet proposed to call *Abstufung*, or *Gradation*. The term is acceptable, and it need only be pointed out that the weak form should not be looked upon as the secondary form, as is the habit of grammarians. Sweet's list contains 52 words showing two or three forms, some of which are non-syllabic (e. g. *l* for *will*, as in *He'll be there*); to these I propose to add *ðæt* and *ðæt* as a conjunction, including its use in attributive clauses, where it is still often mis-called a 'relative pronoun', although it has been shown that this closes the door to its true interpretation, for which I can most conveniently refer to my *English Grammar* ⁶, § 108 ff., p. 114—117. The second addition is relative (not interrogative) *who*, which appears as [-*huw*] and as [-*űw*] in Sweet's transcriptions. The third is the sibilant *s* or *z* as the equivalent of 'does' as in *What's he say?* This last form-word was left unmentioned by Sweet because it was no doubt unknown in his time in educated English; as it is not mentioned in grammars, I may serve some readers by a reference to my *English Grammar* ⁶, § 455'2, and the full discussion of the use in *Taal en Leven* IV., p. 121 ff. Perhaps we may also add the non-syllabic *d* as used for *did* in pronominal questions, treated in the article just mentioned, and the non-syllabic *s* for the pronoun *us* in the groups with *let* when used in adhortative groups: *Let's go now*. Sweet's list is not exhaustive, as he observed himself: «It has not been thought necessary

to include all the self-evident weakenings of *i* to *I*, *ou* to *ðu*, etc. ¹⁾». But it is not unnecessary to consider the various forms of the words enumerated by Sweet, and, most important of all, to remember that Sweet did not intend to give a list of form-words in general, but only of such as show gradation. We will now turn to these tasks, and begin with the one of examining the forms of the words in Sweet's list of gradation words.

The first question that has to be decided is whether we should start with the strong forms in Sweet's list or with the weak forms. It is usual in grammars to look upon the strong forms of words, e. g. of the personal pronouns, as the 'real' forms; thus we find the spelling *'em* for the weak form of what with strong stress is the pronoun *them*. But the justice of this method is more than doubtful; it has been shown, in my *Handbook* ⁵ of 1932, and in the sixth edition of my *English Grammar* of 1941, that the use of the verb stem without *to* can only be understood when we remember that the leading verbs in these groups are generally weak-stressed form-words, and that even the functions of *shall* in these groups are best interpreted when its weak form is taken as the starting-point. These matters concern syntax, however, and can only be mentioned in passing, but it does not seem superfluous to warn the reader that here, as in so many other cases, the observations of a phonetic character are fundamental for the student of syntax. The phonetic form of strong shall also shows its peculiar character, for the vowel *æ* does not occur before final *-l* in any full word, apart from the special word *pal*, which has been mentioned before. We must consequently look upon [jæl] as the strong form of weak [-jæl], and not vice versa. In the same way [hæv] and [hæz] are easily intelligible when we look upon the strong forms as secondary ones; this also explains the final soft open consonant, which is rare in syllables with close contact, as has been shown in chapter II. The

¹⁾ Some other cases are mentioned on p. 132.

same applies to *was*, which cannot have its final consonant explained as inflectional at all, whereas this might be the interpretation of the final consonant of *is* and *does*, although the syllables have close contact, as in the case of *has* above. The clear difference between the particle [ðer] and the adverb [ðæər], both written *there*, as in: There are many people who think so, and in: There he comes, suggests the question whether we have two distinct words here, and it seems necessary to me to answer this question in the affirmative. After what has been observed it will not seem out of place to begin the study of form-words by considering the special group mentioned by Sweet on account of their variety of forms. The list in the Primer of Spoken English contains 52 'words', but the number of forms is much greater, even if we count the weak forms only; and it has already been stated that we must add non-syllabic d for *did*, and non-syllabic s for *us* (*Let's go*). The first group that we will enumerate is that of the single sounds, and the first of these may be the group of syllabic single ones:

1. the murmur-vowel for the indefinite article, for 'of', for the connecting sound in 'five-o'clock', which is not mentioned by Sweet;
2. [ʊw] for relative 'who';
3. [Ij] for the personal pronoun 'he';
4. [l] for 'will' when the preceding word ends in a non-syllabic sound, as in: That' ll do, also when the preceding sound is non-syllabic -l, as in [ei m əfreid ðis həutel l bɪ raaðər ɪkspensɪv] I am afraid this hotel will be rather expensive (Primer of Spoken English p. 82).

The number, if we count the functions of the sounds, is six.

The following cases exhaust the number of form-words in Sweet's list that do not form an independent syllable:

1. [d] for 'do, did, had, would';
2. [s] or [z] for 'does, has, is', [s] only for 'us' in the group *Let's go now*, etc.;

3. [v] for 'have', and for 'of';
4. [l] for 'will' when the preceding word ends in a syllabic sound, as in: He'll go soon.
5. [m] for 'am', as in [əi m əfreid].

The total number is twelve, when we count s and z as one, which seems reasonable.

We now turn to the form-words with a syllabic beginning, and one or more non-syllabic sounds:

1. with the murmur-vowel as the initial sound: [ət] for 'at'; [əz] for 'as'; and 'has'; [əm] for the pronoun 'them'; [əv] for 'have', and 'of'; [əl] for 'will'; [əd] for 'had', and 'would';
2. with initial [ɪ] in [ɪm] for 'him'; [ɪz] for 'his', and 'is';
3. with initial [ɒ] in [ɒn] for 'on' and in [ɒv] for 'of';
4. with initial [n] in [nt] for 'not', when the preceding verb ends in a consonant, as in 'mustn't, shouldn't'.

The total number of forms, counting each according to its functions, is fifteen.

The forms with a syllabic ending come next:

1. with a final murmur-vowel: [bə] for 'by'; [də] for 'do'; [ðə] for 'the', [jə] for 'you';
2. with final [ɪ]: [bɪ] for 'be'; [ðɪ] for 'the'; [mɪ] for 'me'; [ʃɪ] for 'she'; [wɪ] for 'we';
3. with final [ʊ] in [jʊ] for 'you';
4. with final diphthongs: [bɪj] for 'be'; [ʃɪj] for 'she'; [mɪj] for 'me'; [wɪj] for 'we'; [beɪ] and [baɪ] for 'by';
5. with final [n] in such a group as [sn dʒɒn] St. John, i. e. before a consonant only;
6. final [l] in [tɪl] for 'till'.

In the list of the weak forms of gradation-words with a final syllabic sound the words with potential -r have not been included; they form a transition to the group with a non-syllabic ending. In the same way the words that begin with the aspirate may be looked upon as an intermediate stage between the words with a syllabic and those with a non-syllabic beginning. Retaining the order of the preceding lists we begin with the enumeration of the gradation-words with initial h-:

1. [həd] for 'had';
2. [həv] for 'have';
3. [həz] for 'has';
4. [hi] for 'he';
5. [him] for 'him';
6. [hi] for 'his'.

The number is six. It is of some importance to observe that the pronoun *her*, however weak-stressed it may be, does not occur without the initial aspirate. The reason may be that its syllabic part (i. e. the murmur-vowel) is not distinct enough to make it possible for the word to serve its function without the distinctive aspirate.

A word must be added about the weak-stressed forms with an initial aspirate. It has been stated, in ch. 1, that an aspirated beginning is characteristic of syllables with a strong-stressed beginning, and it has also been explained on p. 82, that full words with an aspirate in an initial weak-stressed syllable, as in *harangue* and *hotel*, are contrary to the structure of words in living English. In dealing with the compounds whose second element is a word with initial *h-* on p. 108 it has been shown that the aspirate remains in the compound, in spite of weaker stress, as long as the connection with the independent stem is thought of, but disappears, rather: is absent, when this association does not exist, as in *hedge-hog*, as also in the derivative *neighbourhood* mentioned on p. 104 f. This principle also governs the form-words, which occur with the initial aspirate even when they are very weak-stressed, but only in such words as have an aspirate in their strong forms. Before mentioning the forms concerned, it may be instructive to point out that the observation made here, on *neighbourhood* and on the compounds, is not in contradiction to what has been said about the un-English character of the aspirate in *harangue* and similar loanwords on p. 82, for these words have no related word with an initial strong-stressed syllable containing an aspirate, for they are isolated, as loanwords usually are. Turning

to the form-words with initial *h-* in weak-stressed syllables, we may first of all state that they occur in the first place at the beginning of a sentence, in the second place when they are preceded by a strong-stressed word to which they are appended enclitically. They contain the vowel *i* as well as the murmur-vowel; as the question has never been treated before I begin with a couple of examples that may be welcome to some readers: *hīz bodi en maind wə bouþ ful əv raf strenþ* (Primer p. 50); ‘*ə jü əl hiə?*’ -*səd di ould :ræt, ən iʃ lukt raund* — ‘*həv jü əl dɪsaɪdɪd tə gou?*’, ib. p. 67.

The gradation-words with potential *-r* are the following:

1. [ər] as in *We’re* agreed on that, and in the group with ‘they’, when the whole becomes [ðæer];
2. [ðər] for the particle ‘there’, and for the pronoun ‘their’; also for the adverb ‘there’ in the group ‘there is’, which Sweet transcribes as [ðəz].
3. [fðr] and [fər] representing ‘for’;
4. [hər] for the pronoun ‘her’;
5. [jðr] and [jər] for the pronoun ‘your’;
6. [nðr] and [nər] for the conjunction ‘nor’;
7. [ðr] and [ər] for the conjunction ‘or’;
8. [wər] for ‘were’.

The number of functions of these groups, consequently, amounts to nine, for we count the particle ‘there’ and the adverb of place as distinct words.

The remaining words in Sweet’s list have a non-syllabic beginning or ending, or both; these three groups must now be considered. The following cases of a non-syllabic beginning occur, giving the words in their current spelling because no reader can dispense with consulting Sweet’s book, and the transcription does not seem necessary here: *by, be, been, does, do, than, their, the particle there, the adverb there, the definite article, the adverb the before comparatives, for, from, you, can, could, must, me, nor, not, some, such, saint, should, she, till, to, were, we, will, was, would.*

But a simple enumeration is not really enough; it is of some importance to consider what kind of non-syllabic sound opens these 32 forms. The number of initial semi-vowels is one for *j*, and 5 for *w*; the number of vowellikes is 4; the rest are opens and stops, of which number the opens amount to 13, the stops to 9. The only initial consonant group that occurs is *in* from.

A non-syllabic ending occurs in *at*, *as*, *been*, *does*, *than*, *them*, *from*, *had*, *have*, *has*, *him*, *his*, *can*, *could*, *must*, *not*, *on*, *of*, *some*, *such*, *saint*, *till*, *will*, *was*, *would*. It may be added that 'saint' has a non-syllabic ending before vowels only, as in *St. Anna*; before consonants it is [sn] as in *St. John*. It may perhaps be of use to observe that the group [snt] does not end in a consonant group, in the sense in which the word has been used here, for the nasal is syllabic. The only final consonant groups, consequently, occur in *must* and *such*.

Finally we enumerate the gradation-words with a non-syllabic beginning and ending, which, as the reader will remember, is the usual type in full words; they are the following: *been*, *does*, *than*, *them*, *from*, *can*, *could*, *must*, *not*, *some*, *such*, *saint*, *shall*, *should*, *till*, *will*, *was*, *would*. The total number is eighteen; but when we compare them with the full words, we must remember that several are inflectional, and must consequently be eliminated; this applies in any case to *does*, but of some others the inflectional character is doubtful. It seems better not to include such forms as the pronoun 'them', and the verbal forms like *could* and *should* among the inflectional forms, although they certainly are not stems in any way; thus, no form is ever derived from them, whether with an inflectional or with a derivative suffix.

The above analysis of the weak forms of the gradation-words calls for some general considerations, the most important of which naturally is, whether there is any indication that they differ in their structure from the full words. It has been shown that the stems of one syllable have a

non-syllabic beginning and ending in the great majority of words, and that the words with a syllabic beginning or ending form a small minority, those consisting of syllabic sounds only being an insignificant group. These points are among the first that interest us in the structure of the form-words that have been studied in the above pages; even though the reader remembers that the words enumerated form a small part only of the whole body of form-words, they are an important part, and may help to answer the question suggested, even if only provisionally. In order to give some idea of the proportions of syllabic and non-syllabic beginnings and endings in the weak forms of the gradation-words that we have analysed, it is necessary to know the number of forms that we are dealing with. In counting them, I have considered the diphthongs *bei* and *bai* as one, and I have done the same for the frequent pairs of forms with *ij* and *i*, and of *ūw* and *ū*, also *s* and *z* according to the preceding sound; the forms with initial *h-* and without have been counted separately, as this is far more important from a phonetic point of view, for *h-* is undoubtedly used to distinguish words in English. For the same reason I have treated words with potential *-r* as ending in a vowel-like, not as words with a syllabic ending. Taking these points in consideration, the number of forms with distinct functions may be said to be eighty. Of that number six are single syllabic sounds, and eleven are single non-syllabic sounds; the contrast to the full words seems plain, for the proportion of single syllabic sounds is considerable, and the eleven non-syllabic forms have nothing parallel to them in the full words. The number of gradation-words of more than one sound with a syllabic beginning has been shown to be fifteen, and of the same group with a syllabic ending fourteen (counting 'the' twice: as an article and as an adverb before comparatives). Again both totals seem considerable when compared with the number of the parallel cases in full words. The number of gradation-words with a single initial consonant, in-

cluding the aspirate, is 38, and of these one word has an initial consonant group only (from). The number of words with final consonants is 26, and of these two only have a final consonant group, must and such. Before drawing any conclusions it may be useful to consider the strong forms of the gradation-words enumerated by Sweet; this is a simple matter, and we find that out of fifty-two in his list seven only open with a syllabic beginning, and ten end in one, including the indefinite article, which has been counted in both lists. It must also be considered that the indefinite article [eɪ] and six of the strong forms are marked with an asterisk, to indicate that they occur very rarely; these naturally include the two articles a and the in their strong form. We see that the strong forms of the gradation-words do not differ from the full words to any marked degree, whereas the weak forms, which are far more frequent, of course, do show such a contrast. This conclusion is certainly provisional, for a small number of form-words have been examined only; but they form a strong inducement for examining the rest of the form-words from this point of view. Even though a full treatment is not attempted here, some remarks will be made that suggest to the reader that this line of inquiry may contribute to our understanding of the structure of English words.

The first question that seems to require an answer is what words have double forms or even more forms according to their use in the sentence. When we consider the grammatical character of the gradation-words collected by Sweet, and the few that it seems right to add to them, it is evident that they belong to various classes of words, but all have one thing in common: that they express little independent meaning, or no meaning at all. There are no nouns and adjectives among them, and the verbal forms are such as have syntactic peculiarities as well as phonetic ones, as need not be elaborated here. The rest are pronouns, personal, indefinite, and relative, not de-

monstratives, apart from the definite article, which occupies a place by itself among these pronouns, nor are there any interrogative pronouns, even though the form of interrogative who is 'identical' with that of relative who. Beside the pronouns, the gradation-words consist of prepositions, and conjunctions, and what are vaguely called particles, such as the formal subject 'there'; it might be said that there is one adjective among them, *saint*, but it is hardly necessary to show that the word is a gradation-word only in so far as it is a prefix to names of saints. It is clear that the character of the form-words depends upon their function in the sentence, and that a systematic investigation will have to examine the pronouns, adverbs, prepositions, conjunctions, and the few remaining words that cannot be classed so easily, often not at all. To the latter class belong many words that occur only as members of word-groups, such as the words that are prefixed to proper names (Mr. Jones, Miss Jones). It has already been shown how little value the traditional classification often has; thus, in the groups like *to go* it is still most usual to call the first word a preposition, but no interpretation of the group, and no explanation of the difference between the use of the verb stem with *to* and without can be given unless we recognize the fact that it is a prefix that separates the verb stem from its leading member, as has been done in my *English Grammar* ⁶. And the sentence quoted above, on p. 121, in which *the empire of Morocco* seems to be in contradiction to the group *the city Morocco*, can be satisfactorily accounted for only when we recognize the plain fact that *of* is not a preposition here but a connecting syllable, comparable to the -s- in many compounds, as in *salesman*, etc. (p. 116f.) and also in Dutch, e. g. in *verenigingslokaal*, where the first element (*vereniging*) never takes -s in any function as an independent word. And it is easy to see, when we consider the 'word' of in the English groups in this way, why it is used in such cases as *a slip of a girl* and similar

groups that may perhaps be called appositional; on these groups, see *Handbook*⁵, §1438 ff.; on appositional *the five of us*, see *Eng. Gr. I*⁶, §153. And if it be asked why the word is not used in the apparently similar group *the city Morocco*, the answer seems to be that the contrasting stress on *city* produces a break, as strong contrasting stress is apt to do, and this break makes the connecting *of* impossible or rather unnecessary.

That the form-words possess phonetic qualities that distinguish them from the full words seems to be pretty certain from our examination of those of them that were grouped by Sweet as gradation-words. Some words have been added to Sweet's list, and others might be added; thus, *shall* is not in the list, but Sweet transcribes it as [-ʃæl, ʃəl, ʃə], the latter on p. 80: [whitʃ :trein ʃə wɪj gou bæi tɛmorðu], so that it might have been added to the list of gradation-words with a final murmur-vowel. And on the same page we find the preposition *for*, which is indeed included in the list of gradation-words, but as a syllabic word only, used non-syllabically: [ən ðə wɛz :nou help fr ɪt]. It may be said that real form-words are words of one syllable only or of none at all; such words as *any*, which might perhaps be claimed as form-words on more or less acceptable grounds, especially when we find *some* included by Sweet in the list of gradation-words, should on this account be rather excluded, like other dissyllables. Our discussion of the small number of words that Sweet has included in his list has shown that they often end in a murmur-diphthong, without potential -r, a type of words that is rare in full words, as we have seen. It also appears that opens and stops occur less commonly, and stops least of all. The semivowels and vowellikes, on the other hand, play an important part in these words. It seems best to leave the full discussion of form-words for a later opportunity, and to turn to the subject that is inevitably connected with the form-words: the structure of word-groups, in which the form-words play such an important if humble part.

It has already appeared in the discussion on form-words that they often depend for their form on the preceding or following word. But this is not peculiar to them, for it occurs in full words in potential -r as well. This subject has been treated so completely and satisfactorily by Sweet under the heading Sound-Junction (Primer p. 11 f.), that little need be added. As to the occurrence of -r before words that begin with a vowel, it has recently been stated by English writers on phonetics that the old view is not correct, or no more correct, for the words are not infrequently spoken without -r even though a word that opens with a syllabic sound follows. The fact is correct, but the observation is not new, for any reader of Sweet's transcriptions can easily point out cases when a word in potential -r appears with the murmur-vowel before a syllabic sound, so that a single example will suffice here: [ən þrūw wont əv tækt ən kɔmən sɛns ɪz kəriə z bɪjn :raaðər ə feiljə ðn ðə :houl], Primer p. 96 (And through want of tact and common sense his career has been rather a failure on the whole). But this is according to what one might expect from Sweet's own statement on p. 11: 'r only occurs before a vowel following it without any pause', for it is evident that there is just such a pause here, and this pause is due to the character of the group that follows, as has been pointed out in my *English Grammar* ⁶, § 83, 3. As to the insertion of -r in such groups as *an idear of mine*, it has already been shown above, on p. 85, that it is caused by the extra-close character of the groups concerned; this explanation had already been given in my *Introduction* ⁷, p. 106, and needs no further comment. Something of the same kind is to be said of the twofold form of the 'preposition' *of* in the sentence already quoted on p. 94 [-ðei əl -əv ðə mænəz əv groun -ap :mən ə ðə wæld], where it is clear that the group *men of the world* is an extra-close group that might be interpreted as a compound rather than as a group, very much like *man-of-war*, or *bill of fare*, mentioned by Sweet on p. 28. There is

another point in the structure of word-groups that needs further study, and that is the stressing and the intonation of the members. This has perhaps been first pointed out by students of syntax, for there is no way of accounting for the parallelism of such groups as *to go see* and *to go and see*, or the real function of such groups as *he lay and sobbed*, unless by studying the subordination of one of the members of these apparently loose groups to the other; on this point I have made some observations in the chapter on word-groups in my *Handbook* ⁵, and more recently in my *English Grammar* ⁶, to which I may be allowed to refer the interested reader. These remarks may suffice to show that a full description of the phonetic structure of English words cannot be written without considering the structure of word-groups, for all words depend upon their function in the groups, and some of them do not exist apart from the groups ¹).

VI.

English Word-Types

In the preceding chapters the simple stems of one and two syllables have been examined, the inflected forms of these, derivative stems and their inflected forms, the compounds, and the form-words. The time seems to have come now to consider the relations between the various groups, as far as number and frequency in actual speech or writing is concerned. In doing this we shall be obliged to include

¹) This has been shown above in dealing with the gradation-words, but it also applies to what may be called full words, if they are words at all; such are *fro*, which occurs in the group *to and fro* only, and *random*, which is never used except in noun groups (*a random remark*) and in the group *at random*, so that it is not possible to classify the word as a part of speech. These matters do not concern the phonetic structure of words, however, and are not treated here.

the stems of more than two syllables; there will be no difficulty in that, even though these words have not been treated with regard to their structure. We must distinguish between number and frequency, for it is one thing to consider the number of words of a given type, it is quite another to inquire into the frequency of their use. On the latter subject we find some information in a book by G. Dewey, *Relative Frequency of English Speech Sounds*, Cambridge, 1923, Harvard University Press. I have no access to the book, but from the borrowings that Trnka makes I gather that the work has been done somewhat mechanically, the words being considered according to the way they are printed, and no distinction being made between a word like *good* and a word like the indefinite article. At any rate I shall make little use of the statistics that Trnka quotes, and refer the reader to the original work if it is accessible to him.

Before we speak of the numbers of the stems of one syllable or of two syllables, the only ones that have as yet been systematically examined, it is necessary to consider what the words monosyllabic and dissyllabic imply. In the word-group *the house* we may have two words of one syllable each, but it is evident that the real state of affairs is very defectively indicated by the terms; the first word, if it is a word, is far weaker than the second. The same applies, only in a still greater degree, to the group *a house*, and the chapter on form-words shows plenty of 'words' of this type, which are phonetically subordinate, and semantically as well, although no student of language will be inclined to say that they are unimportant for that, for words of this type often decide the character of the sentence, in the same way as stress or intonation may do. We need not dwell on this after what has been said in the chapter on form-words, and it is not necessary either to refer the reader to specific chapters of syntax, for almost any chapter of syntax must deal with elements of this type, whether it be the chapter on sentence-structure or

on some part of speech. The form-words of one syllable, if this is not a case of a repetition of terms, for form-words may be considered as almost invariably of one syllable, may all be grouped as semi-syllabic when they occur in their weak, i. e. their usual form. It has already been shown that some of them also occur as non-syllabic elements, which is often indicated by the current spelling, as in *He'll be in time, I hope*, English being so fortunate as not to have an 'official' spelling. The semi-syllabic and non-syllabic words are void of any meaning, but the classification as empty words as proposed by Sweet, is of no concern to us here, at any rate, and I have indicated, in the chapter on form-words, that a consistent grouping on this line may not be advisable. The distinction of form-words and full words, though not very common among students of language, has always been observed by laymen, poets in the first place, who have always understood, if instinctively, that counting syllables in the Romance languages is a different thing from counting syllables in the Germanic languages. The group of article and substantive especially is often treated by Germanic poets as one word, the prefix being ignored metrically. From these observations it will be clear why words that Trnka calls stems of one syllable will often be termed semi-syllabic or non-syllabic in the following statistics.

The remarks that have been made on the semi-syllabic stems and the non-syllabic ones naturally apply equally to what are generally looked upon as dissyllabic words. It has already been remarked in the chapter on dissyllabic words that the words of this type with initial stress, like *button, butter, butler*, frequently end in a syllabic nasal or in the murmur-vowel, the latter in the great majority of cases with potential -r, a smaller number in i and u. Words with two strong vowels form an insignificant minority, such as *insect* and *sarcasm*, insignificant in their number but also in their importance, i. e. their frequency, for they do not belong to the most indispensable

part of the vocabulary. It is clear that words that appear to be dissyllabic must be distinguished into two groups: those of $1\frac{1}{2}$ syllables and those of two syllables. That distinction is also necessary in a number of 'dissyllabic' words with final stress, such as *ago* and *afraid*. The distinction, though of a phonetic character, has its morphological and syntactic consequences, which is only what was to be expected. It has already been pointed out, in the *Handbook* ⁵, § 1724 ff., that adjectives or adverbs like *tender*, *narrow*, *often*, *happy* form their comparatives and superlatives by the syllabic suffixes *-er* and *-est*, and yet the number of syllables does not increase; in words of more syllables such as *unhappy*, *ignoble* the number of syllables after the strong stress also remains the same when the syllabic suffixes of comparison are added. The same phenomenon can be observed in a number of other words, as has been remarked in the same place, where it is explained that it is a mistake to imagine that the number of syllables of a word can be settled with mathematical accuracy. This also explains why words like *scattering* or *quiet* are often taken by poets to have one syllable less than might be imagined. It is also stated in the passage referred to that *eager* and *proper* do not take the suffixes of comparison, although they seem to be of the same type as *tender*; the reason is evidently that medial *-gr-* and *-pr-* with a final weak syllable with potential *-r* are not 'convenient'.

Just as words that may be supposed to be of the monosyllabic type when used in a certain way, especially with strong stress, may be semi-syllabic or non-syllabic in other cases without losing their identity, it may happen that an apparently dissyllabic word is really of one syllable. A well-known case is *tired*, and similarly to *tire*, *power*, all of them counted as monosyllables by Trnka; but anyone who pronounces them with the full *ai* or *au* and the murmur-diphthong is bound to make them dissyllabic, and this is considered the 'correct' pronunciation by

many. Others, however, among them many clergymen, above all in the reading of the collects, where the word 'power' occurs so fortunately to enable them to exhibit their superior education to their congregation, pronounce the word without the medial i or u, which either disappears or becomes a mere glide, so that the word is of one syllable. In familiar speech the adjective tired is so pronounced, too, and this explains a person writing in a letter: I've been tireder this week than I have been for weeks. On this subject I may refer the interested reader to *Handbook I.* ⁴, § 171.

What has been said of the stems, is also applicable to some derived words and some compounds; thus, helpful may be, or is, pronounced in two full syllables, but the second syllable may very well be syllabic l, in which case the word is rather one of $1\frac{1}{2}$ syllables than of two. The same may be said of the compounds or derivatives in -mən, as in chairman, postman, Dutchman; and this naturally remains the same in words that are trisyllabic, such as beautiful and Chinaman. The last-mentioned words may be considered to have one full syllable and two half-syllables.

The reader will see that the comparison of words according to the number of their syllables is no easy matter, if indeed one should not rather say that it is impossible. The numbers in Trnka's lists: 3178 stems of one syllable, 2209 of two syllables with initial stress, 229 of two syllables with final stress, even if they are exact, do not tell us much, though they may tell us something at least, for the relation of 3178 words of what Trnka calls words of one syllable to 2438 words of two syllables, i. e. of 57 % to 43 % tells us something, however inexact it may be. But it must be remembered that these figures refer to stems only, and that in actual speech inflections count for something even in English, although the number of syllabic suffixes of that type is very small, being limited to id and iz in a small number of words, and to the very

frequent suffix -ing. Besides the inflectional suffixes, however, we must also consider the derivative ones, and next we must consider the compounds, and these are closely, perhaps inextricably, connected with the word-groups. One thing, at any rate, is certain: there can be no question of English words being generally of one syllable; even when we speak of the number of words in actual use, not of their frequency. On the contrary, we can say that the words of more than one syllable outnumber the monosyllabic ones, and also that the number of words of one half-syllable and of no syllable is very small.

The number of simple words with more than two syllables is not known, but it is no doubt smaller than that of those with one or two syllables. Still, the words of more than two syllables are by no means a negligible group, even when we do not include the inflected forms, for a good many of them are among the most frequent words of the language: remember, generation, transparent, official, to occupy, etc., and any text that the reader may pick up will show cases in plenty. But the number partly depends upon the style of the passage selected: longer words are more frequent in narrative style than in conversation, and they are more frequent in argument than in narrative style. An examination of the frequency of English words of different types with regard to the number of their syllables, consequently, must take account of these facts, just as we do in syntax and in the study of the vocabulary, and for this reason it seems advisable to me to study three texts, of a colloquial, a narrative, and a more speculative style as a basis for a provisional estimate of the relative frequency of words of the various classes that we have mentioned. In statistics it is safe to be modest in the selection of one's material, for it is apt to exhaust the patience or energy of the explorer as well as of the reader; for this reason I propose to begin by taking a comparatively short passage of each of the three types indicated, leaving it to successors to increase

the material investigated if the lines indicated here seem to promise success. The three passages are 1. The first 470 words of *A Bill of Divorcement* by Clemence Dane, first produced in 1921, and reprinted in *Great Modern British Plays* edited by J. W. Marriott (Harrap, 1929); 2. the first page and a half of Sweet's narrative *The Old Chapel*, in the *Primer of Spoken English*, p. 49—51 (first paragraph), containing 475 words in all; 3. a passage from Walter Pater, *Appreciations*, p. 18 (An acute philosophical writer) to p. 20 (not organically complete), containing 471 words. The words are distinguished according as they are non-syllabic, semi-syllabic, or consist of one whole syllable, or $1\frac{1}{2}$ (either $1 + \frac{1}{2}$ or $\frac{1}{2} + 1$), two halves, one whole with two halves, one whole with three halves or with four halves, two full syllables, two full with one half, etc., as the lists and table will show. As examples of non-syllabic words I quote the sibilant in *she's*, *Kit's* where it represents the verbal form is; of half syllables: *she*, *as*, etc., as in the chapter on form-words; of one full with a half: *dancing*, *Christmas*, *auntie*; of a half and one full: *approve*, *again*; of a full syllable and two halves: *usual*, *awfully*. There is unavoidably some arbitrariness in the decision in some cases, but as the three texts have been examined by the same mind, the result is not much affected by it, as far as numbers and percentages in the three texts with regard to each other are concerned. And any reader may if he pleases repeat the counting and choose other texts that he may think more suitable.

In the first text, by Clemence Dane, the number of non-syllabic words is 31, of semi-syllabic ones 176, of fully syllabic words 157, of full syllables with a semi-syllable 63, of a semi-syllable with a full one 20, of a full syllable with two halves 12, of two halves 2 (*into* and *upon*), of a full syllable with three halves 1 (*disrespectful*), of a full syllable with four halves 1 (*opportunity*), of two full syllables 2, of two full syllables and one semi-syllable 4,

of two full syllables and two semi-syllables 1 (cigarette-case). The reader will not be surprised to find that the two words with two full syllables are compounds: card-case and prayerbook, although he might have been inclined to include the last in the group of words with two full syllables and a semi-syllable, which I prefer not to do, because medial position makes *ea* very short indeed.

The second text is a simple narrative, and has the advantage of being in phonetic script, so that all doubt about the number of syllables may be considered to be unjustified, for nobody ever surpassed Sweet in the care with which he did this sort of work. The number of non-syllabic words here is limited to two: *s* in the group *it's*, and *d* for *would*. The number of semi-syllables in Sweet's text is 192, of full syllables 165, of full syllables with one semi-syllable 63, of a semi-syllable with a full one 10, of a full syllable and two halves 16, of a full syllable with three halves 11, of one full and four semi-syllables 1, of two full syllables 8 (all compounds), two full syllables and a semi-syllable 6 (compounds: *writing-desk*, *ourselves*, although this might be classed with the words of two syllables, of course, *well-to-do*, *transparent*, *bird's-nesting*), two full syllables and two semi-syllables 3 (*dinner-table*, *pigeon-shooting*, *weasel-hunting*). Words of two semi-syllables do not occur, but this may be accidental.

In Pater's text the numbers are as follows: no words of the non-syllabic type, 204 words of a half syllable, 95 of a full syllable, 56 of a full syllable with a semi-syllable (*writer*, etc.), 23 of a semi-syllable with a full one (*acute*, etc.), 40 of one full syllable and two half-syllables (*obvious*, *precision*, etc.), 29 of a full syllable with three halves (*economy*, *rhetorical*, etc.), 9 of one full and four half-syllables (*philosophical*, *initiatory*, etc.), one of a full syllable with five semi-syllables: *irregularities*, five of two full syllables (*essay*, *insight*, *foresight* twice, and *abstract*), three of two full syllables and a semi-syllable

(retrospect, afterthoughts, unconscious), two of two full and two semi-syllables (long-contending, architecture).

Some conclusions are evident, such as this: that words with two full syllables are characterized by this as compounds, and that the longer words occur especially in the third text, i. e. in argumentative style. The proportions become clearer, however, when we consider the percentages of those word-types that occur with any frequency, and for this reason the following table may be welcome.

Number of Syllables	Conversation		Narrative		Argument	
1. none	31	6'6 %	2	—	—	—
2. semi-syllables .	176	37'4 %	192	40 %	204	43 %
3. one full syllable	157	33'4 %	165	35 %	—	22½ %
4. 1 full + ½ syl- lable	63	14'4 %	63	13 %	56	11'9 %
5. ½ s. + 1 full s.	20	4 %	10	2 %	23	5 %
6. 1 full + 2 halves	11	2'5 %	16	3'3 %	40	8'5 %
7. 1 full + 3 halves	2	—	11	2'3 %	29	6 %
8. 1 full + 4 halves	1	—	1	—	9	2'1 %
9. 2 semi-syllables.	2	—	—	—	—	—
10. 1 full + 5 halves	—	—	—	—	1	—
11. 2 full syllables .	2	—	8	—	5	—
12. 2 full s. + ½ s.	4	—	5	—	3	—
13. 2 full syllables + 2 halves . .	1	—	3	—	2	—
Total	470 words		475 words		471 words	

These figures justify some comment, although we shall make no attempt at exhausting their significance; it is well-known besides from experience that statistics lend themselves admirably for reading into them conclusions

that have really been formed independently. The first point is the relation of number and frequency, which must be distinguished, as has been remarked; the necessity is clear from the figures, for if we count the first three groups together, which may be called words of less than two syllables, we find that they occupy respectively 77·4 %, 75 %, and 65·5 % of the words in the three texts. The groups 4 and 5, containing the words of more than one syllable, and less than two full syllables, amount to respectively 18·4 %, 15 %, and 1·69 %. The reader will remember that in Trnka's lists the total number of the first group, as far as the stems are concerned, in relation to the stems of two syllables (practically all of $1\frac{1}{2}$ syllables, for the compounds are not included in Trnka's lists) are 57 % against 43 %. These figures are surely sufficient to prove that number and frequency are two absolutely distinct things; it is hardly necessary, therefore, to point out that in the frequency-list of words of $1\frac{1}{2}$ syllables there are inflected words, which increase the percentage of the group of words with $1\frac{1}{2}$ syllables, so that the contrast between number and frequency is really even greater than the figures suggest.

The relation of number and frequency being disposed of, we can turn to the consideration of the various classes of words that have been counted with respect to their frequency only. It is plain that in any of the three texts the words of one syllable together with those of $1\frac{1}{2}$ syllables occupy the chief space, amounting together respectively 95·8 %, 90 %, and 82·4 % in the three styles of English. In the language of ordinary life the rest counts for very little: less than five per cent., and in the other styles the highest percentage is a little over seventeen. We may now ask what the figures teach us with regard to the differences between the various uses that English people make of their language, which we have roughly divided into three: ordinary life in daily business or conversation, narrative, and argument. I have not

treated literary English as a special group, for it may belong to more than one group: it may be of the first as well as of the second or third type. The most striking result of our table is the strong contrast between the first two styles and the third with regard to words of one syllable (counting those of no syllable and a half syllable with the full-syllable ones). The question may be asked in what way the loss of monosyllables is made good in the third type: it is evidently not by words of $1\frac{1}{2}$ syllables, nor by words of two full syllables, but by longer words, primarily words of a full syllable and two semi-syllables, which amount to 8.5 % in the third text against 2.5 % and 3.3 % in the two others. And the second source of new words in the third style is the 7th group, words of one full and three weak syllables, which amount to 6 %, against a negligible number in the first style and 2.3 % in the second. There are no differences of importance in the frequency of words with two full syllables, whether with weak syllables or not; this is easy to understand, for these words are nearly all compounds, and English does not use compounds in anything like the way of German, or even of Dutch: it uses the compounds that it has, but does not freely form them, as is noticeable when we compare German and Dutch. On the German use of compounds I have made an observation, illustrating it with a characteristic and conclusive text, in my *Einführung in die deutsche Syntax* p. 251 f. Instead of compounds, English resorts to word-groups, which require a special chapter in English grammar more than in any of the other Germanic languages, although this necessity has not been fully recognized until now by writers on English grammar, even though my *Handbook* ⁵ set the example ten years ago.

It has been stated that the words of one syllable, taking this term in the sense that has been used here repeatedly, are in a great majority, and that the words of $1\frac{1}{2}$ syllables occupy the chief part of the remainder.

I have not concluded that English 'tends to' become a monosyllabic language, whatever that may mean, and whatever right a student of language may have to play the part of a prophet. And I do not intend to give a specimen of prophetic grammar here, but prefer to examine the facts that we have observed, and to interpret them as well as I can. In the first place it may be concluded that English has a preponderance of words that may be called monosyllabic in a wide sense, but is not a monosyllabic language at all. Even if three quarters of its vocabulary in actual use, as distinct from the vocabulary to be found in the dictionary, is of not more than one syllable, this does not make it like the languages that are really monosyllabic, such as Chinese. Of course, a comparison of living English with living Chinese would be valuable from this point of view, and I should not hesitate to add this comparison to my comparative table, if only I disposed of a familiar knowledge of present-day Chinese. But I must leave that to more competent linguists, for it would be a mistake to attempt a systematic comparison of English and Chinese with the help of what knowledge of Chinese one can gather from an admirable little book by Karlgren, *Sound and Symbol in Chinese* (Oxford, 1923), even if this is eked out by the clear and instructive sketch in F. N. Finck's *Haupttypen des Sprachbaus* (*Aus Natur und Geisteswelt*, Teubner, 1910). When one compares the actual state of things in living English and in living Chinese, it seems to me that the distinction that I have made between words of no syllable, of a half-syllable, and of a full syllable in present-day English is also of importance because it expresses a fundamental difference between English and Chinese words of one syllable. And the extremely limited phonetic variety of Chinese monosyllables, which do not show the multiplicity of consonantal beginnings and endings that characterize the English vocabulary, is an argument against any attempt to identify the two language-types, even without considering

the fact that words of more than one syllable play a very considerable part in the structure of the English vocabulary. I leave the comparison of the two languages to more competent hands, but I have discovered, perhaps rather remembered, since I wrote the above sentences, that I am not the first to warn students against a superficial comparison of so-called English monosyllabism with the really monosyllabic languages, such as Chinese. For it is more than a hundred years ago since Wilhelm von Humboldt pointed out that English has remained an inflectional language, whatever losses the old inflectional system may have suffered, and that it is in no way on the road that leads to a monosyllabism of the Chinese type, or to monosyllabism at all. In chapter 21 B of his famous treatise *Über die Verschiedenheit des menschlichen Sprachbaus*, edited by Steinthal in the *Sprachphilosophische Werke* (1884), p. 580, he declares: 'Gäbe es auch eine sanskritische (i. e. Indogermanic) Sprache, die auf dem hier beschriebenen Wege chinesischem Entbehren der Beziehungszeichen der Redeteile nahe gekommen wäre, so bliebe der Fall dennoch immer gänzlich verschieden... Auch würden immer, wie es namentlich in der englischen Konjugation der Fall ist, einzelne echte Flexionen übrig geblieben sein, die den Geist an dem wahren Ursprunge und dem eigentlichen Wesen der Sprache nicht irre werden liessen.'—Although we may have a different opinion now on the special merits of inflected languages, or of the Indogermanic languages, when compared with those of other types, we shall do well not to make light of Humboldt's remarks on 'einmal flektierend immer flektierend', and this also applies to the apparent monosyllabism of English, or its likelihood for the English of an unknown future, when compared with the actual monosyllabism of living Chinese.

It seems a more profitable, if also more modest task to compare English with regard to the structure of its vocabulary with that of languages that the student knows

intimately enough for such a comparison. Such a familiar practical and theoretical acquaintance can only be gained by an experience of many years, so that the number of languages that a student can deal with is necessarily small, but here if anywhere cooperation is a possible way out of the difficulty, and I hope to give a practical example of such a cooperation soon by publishing the result of a similar examination of three texts each in some living Indo-germanic languages that I believe I know well enough for the purpose. A good deal of this work has already been done, so that I have all the more reason to omit the remarks that were made in the original edition of this book with regard to Dutch; but some remarks may be profitable still. In the first place it is evident that in this sort of investigation the writer must decide whether a given sound or group of sounds is a word or not, in other words he must have a definite idea of what the term 'word' implies. But experience has shown that a theoretical answer to this question leads to no end of difficulties, and that the only practical way out of it is to trust to the student's intuition with regard to the languages that he knows intimately; his 'opinion' in the case of other languages is of course worthless, as worthless as that of any other layman. It has already been pointed out that some English semi-syllabic or non-syllabic words can very reasonably be interpreted as prefixes, as has been shown in the case of the articles and the word *to* in groups with a verb stem. The value of this observation has been shown in *Taal en Leven* III., p. 161 ff., where I have explained the use of the 'split infinitive', as in this group: to kindly hand the keys. I have pointed out there that the cause of the abhorrence of this construction, which is yet so frequent, and so natural when one compares the perfectly unobjectionable and parallel case: He kindly handed the keys to us, must be looked for in the feeling of speakers that *to* forms part of the verb stem, in other words: is a prefix rather than a word. The reader to

whom the article might not be accessible may also refer to the brief treatment in *English Grammar* ⁶, § 147, 4, and 156, 2, where it is shown that the phenomenon has a good many parallels in living English, of which I will quote one only: Do you sort of cling to him?, which it would be unreasonable to separate from what follows immediately in the next quotation: I like to sort of spread my jam. There is something else that may be worth notice: many of what we may now call prefixes, such as the articles and the prefix *to* in verb groups, never lose their syllabic character, which may seem all the more surprising to the historical student of English, for he knows that the non-syllabic definite article was perfectly common in earlier English, down to the times of Milton, Cowper, and Gray (Elegy), as I showed many years ago, in my lecture on *Taal en Maatschappij*, p. 14. And this is even the more remarkable because the very suggestion that Milton when writing *th'angel* could have meant a non-syllabic form of the article was indignantly rejected by his biographer and critic Masson, who thus showed his ignorance of earlier English, which does not concern us, but also that to a modern Englishman the idea that the article should be taken as non-syllabic, and that by a poet, is unthinkable. In this respect standard English forms a strong contrast to the living dialects, for which the reader may consult the dialect grammars; I only quote one example here: *back o't mill* for 'at the back of the mill (i. e. factory)'. But the student should beware of generalizing here as much as anywhere else, for the statements made are not contradicted, when they are read carefully, by the observation that Sweet in his inexhaustible *Primer of Spoken English*, on p. 45 writes: [If *œi wə tə -kam niərə t jü, œi fəd skɔtʃ jü tə dəp*] 'If I were to come nearer to you, I should scorch you to death.' The non-syllabic *t* in this sentence is the local preposition, which has nothing to do with the prefix *to* that characterizes the verb stem as non-finite.

There is something else that characterizes living English, and differentiates it from such related languages as Dutch and German: the occurrence of soft final consonants, and especially of the soft final consonant groups, for these characterize the words as inflectional forms; the same applies to some hard final groups as in deaths, on which enough has been said in chapter IV. This is a strong argument in support of the view that English, in spite of the small number of inflectional suffixes must be looked upon as inflectional as much as any of the related languages that have more of such inflectional forms. Of course, I abstain from a definition of the term inflection, as I have abstained from a definition of the term word or word-group. Such a definition has never been successful when the task has been undertaken by a speculative mind, and is more likely to be performed in a more or less satisfactory way by a scholar who has a real, i. e. intimate, knowledge, not a bowing acquaintance only, with a good many languages of the most various types. For this reason I refer to the instructive book by a student of African languages that may be unknown to some at least of my readers, which would be a loss to them: *Die Entstehung flektierender Sprachen*, by Carl Meinhof, 1936.

As to the number of inflections in living English, it will be agreed, I suppose, that the three suffixes of most plural nouns and of the third person of the present-tense of most verbs are really one only, so that we may speak of a triple suffix in both cases. Of course, this does not mean that we have to deal with one suffix only, for there can be no question of identifying the suffix for the plural of nouns with the suffix for the singular of the verbs, so that we have to deal with two triple suffixes. But the question naturally arises which of the threefold forms is the essential or central one, as in stays, books, and wishes, examples that may represent nominal or verbal forms. A student of language in the middle of the nineteenth

century answered: the 'proper' suffix is hard s, and after voiced (considered a more 'learned' but really less scientific term than 'soft', as we know now) sounds this turns into z; but after sibilants the suffix 'becomes' -iz. The 'official' historian of language of the second half of the preceding century looked down upon descriptive grammar as a primitive stage that had become a matter of the past, although, unfortunately, it was not clear what should be the attitude of the man who really cared whether his pupils at the university would be able to do their work in the secondary schools of their country or not. But in spite of this drawback, most of them confidently declared that the only really scientific attitude towards language was to look upon it as something that was always becoming something else, so that the task of the student was to describe this development. And it was thought a matter of certainty that the 'real' ending was -iz, which 'in the course of time' had been shortened to -z, but after breathed consonants had been assimilated to the preceding sound to -s; the old ending had remained only after sibilants. It was thus shown how beautifully clear and simple everything becomes when one consults the history of a language; but there was a condition attached to this: the student was expected to accept the clear and definite statements, and to refrain from the unacademic habit of asking inconvenient questions, and this was not only expected in the study of historical grammar, but even more in the study of prehistoric grammar. Thus, it was not considered proper to ask the first class of grammarians, those who explained that the proper ending was hard -s, why a word like stays takes soft -s, for stems like cease and house with hard -s are common enough. Nor was, and perhaps is, it proper to ask the historical student, especially if he was a recognized authority on the subject, why words in potential -r such as enter remain dissyllabic in the third person he enters, whereas the form with the suffix -ing, which is apparently parallel to the supposed

suffix -iz, produces entering, i. e. a form with one syllable more than the stem. And it was also difficult for a really inquisitive learner, to keep back the question why Chaucer uses such words as Venus in the function that would seem to require a genitive without adding this suffix -iz, or something like it. We see, therefore, that the 'pre-historic' explanation, i. e. the explanation of grammarians before the advent of historical language-study, and the 'historical' explanation since the rise of this glorious aera, leave the inquirer with empty hands in this matter, as soon as he is so little of a man of the world as to put 'inconvenient' questions. It seems better, therefore, to look for a more acceptable account of the triple form of the two suffixes; the only way out seems to be to try whether the only possibility that has not yet been examined may have some truth, perhaps the whole truth: whether the suffix -z may be the essential or fundamental form of the two triple suffixes. If we look upon -z as the fundamental form, it is evident that words in a soft consonant (including the vowellikes) or in a vowel or diphthong take it; also that stems in a hard consonant assimilate it to -s. And the words in a sibilant? It is clear that neither -s nor -z are possible; the ending, *if there is to be one*, must be syllabic, and as -z is the fundamental form, there is no reason to make a change in that respect. But why should it be weak i rather than the murmur-vowel or some other weak vowel? Perhaps the answer may be that in weak syllables with a final consonant i is the commonest vowel, especially before gum-consonants, as in the words in -ed and -ness. Of course, there is no necessity for this suffix to be -iz and not -ez; and this is shown by many dialects where the murmur-vowel is the common one in the plural suffix. It seems that we have a case here where the exact description of the language of the present day helps to explain the questions of historical grammar, not vice versa, as is too often fondly supposed. It is clear, too, that in our

theory the trisyllabic form of entering by the side of the dissyllabic one of enters does not require any special explanation. Nor does it seem necessary to point out in detail that the fundamental character of the suffix -z is also made acceptable by the circumstance that the inflected forms show many consonant groups ending in -z that never occur in stems, as has been explained before. The phonetic analysis of the two suffixes, therefore, is in agreement with our explanation of the relations of the threefold forms of the two suffixes, I repeat the *two* suffixes, for they are really independent elements, in spite of their phonetic identity. And even this is not enough, for the suffix of the genitive of personal nouns, though apparently identical, in form at least, with the two others, is really different in a phonetic as well as in a syntactic sense. For it is well-known, though little regarded in this connection, that the suffix of the genitive is not used in the same way as the suffix of the plural; thus we distinguish the plural wives and the genitive wife's, and similar cases, also the plural mothers-in-law from a genitive my mother-in-law's interference, the Princes of Wales and the Prince of Wales's visit, etc., on which I may refer the reader to the *English Grammar* ⁶, § 286 f., where it is also pointed out that we have the plural lookers-on but no genitive at all. These facts seem sufficient to make us accept the existence of three triple suffixes in a sibilant in living English, used in nouns and verbs. And, to make matters more complicated still, there is no reason to take for granted that the explanation that has been proposed here for the form -iz in the plural of nouns and the singular of verbs, must also be the correct account of the triple form of the suffix of the genitive. For the same word may take a plural -iz and not a genitive; thus, a family of the name of Caruthers might be spoken of the Carutherses, but the genitive is not so used, as I found confirmed by an English friend whom I requested to read out the beginning of Alec Waugh's *Loom of Youth*: There

comes sometime an end to all things, to the good and to the bad. And at last Gordon Caruthers' first day at school, etc. He read Caruthers as a trisyllable, and wondered what I was driving at when asking him to do me the service; and when I explained this *after* he had read the sentences, he could not say why he had read the form Caruthers' in that way, but felt quite sure it could be nothing else. On the possible causes of this peculiar position of the genitive-suffix -iz a remark may be added here, although it cannot be said to be quite new; for in my *Handbook* I have devoted a special section to the Character of the Genitive, in which it is pointed out that the form is rather of a derivative than of an inflectional character. This is, of course, most evident in what I have called the groups with the classifying genitive, which indeed cannot be clearly distinguished from compounds at all. This also explains the differences between the plurals of word-groups and their genitives as far as these exist. The genitive has also been treated in my recent *English Grammar* ⁶, § 279 ff., where the genitive of word-groups has been treated more fully and satisfactorily, and greater emphasis is laid on the 'subjective' character of the relation between the genitive and its leading noun in groups with a defining genitive as compared with the *of*-groups, especially in the Addendum to § 285, 3. There can be no doubt that in living English we must distinguish three independent suffixes with a triple form of the sibilant. But there is still another observation to be made on the suffix -iz in all the three functions that have been mentioned: it is true that the non-syllabic sibilant would be impossible as a suffix when the stem ends in a sibilant, just as non-syllabic d or t would be impossible in the case of stems in a gum-stop, but it does not follow that there must be a syllabic suffix in all these cases. This is shown by Dutch, which has a syllabic suffix -də or -tə for the preterite of most verbs, such as *wagen* and *waagde*, *maken* and *maakte*, but leaves the stems that end in -d or -t

without a suffix containing a consonant, so that the preterite of *raden* is *raadde*, i. e. [rādə], and the preterite of *wachten* is *wachtte*, i. e. [ɣaxtə]¹). The consequence is that the plural of the preterites of such verbs differs in no way from the present: *wij raden* and *wij raadden*, *wij wachten* and *wij wachtten*, do not express different forms, being [rādən] and [ɣaxtən] in Eastern Dutch and in other parts of the country where final -n in weak syllables is retained, and [rādə] and [ɣaxtə] in Western Dutch, chiefly in Holland proper. The question may therefore be put why English has thought the syllabic suffixes *iz* and *id* a necessity, whereas Dutch has not troubled about its disappearance, or rather its absence, for we are dealing with the facts of living speech only. The experience of Dutch shows that there is not the slightest inconvenience in the absence of the tense-distinction, and the use of the noun stem in English in an attributive function is sufficient proof that there would be no inconvenience in English either if the syllabic suffix for the genitive did not exist. An additional remark will be made on the genitive-suffix in the last chapter.

Perhaps it may be useful to consider the suffixes of the comparative and superlative, for these are always syllabic, no matter what the final sound of the stem may be: *greatest*, *solidest*, *tireddest*. It is even more remarkable when we remember that in earlier English, down to Shakespeare, the superlatives were also formed with non-syllabic -*st*. This suggests a comparison with the phenomenon that we have observed in the case of *earnest* in ch. 2, but it hardly forms a parallel, for the use of syllabic *ist* in the superlative is independent of the form of the stem. The use reminds us of what we have observed in the definite article, which was also non-syllabic in earlier English, and is never so used at the present day, at least by educated speakers. The most likely explanation seems to be that both the article and the suffix of the super-

¹) The initial consonant of *wachten* is a weak (soft) lip-teeth stop.

lative are thought of as serving a definite function, which makes it necessary for them to retain their independent form. If this explanation should be acceptable, it would be one more proof that an educated speaker of the present day is more distinctly conscious of the elements of his sentences than speakers of earlier English, and this conclusion can be supported by a good many other observations such as have been collected in my lecture on *Taal en Maatschappij* of 1909. We can formulate this theory in this form: that living English in its standard form is more analytically thought of than the English of dialectal and of earlier speakers. The same idea can be shown to be acceptable on syntactic grounds, but this is not the place in which to enter on the discussion of the subject, although it has seemed too important to me to pass it over in complete silence.

VII.

Retrospect

In the preceding pages the form of English words has been examined with regard to the sound-material with which they are built up, special attention being paid to the use of the sounds at the beginning, the end, and the middle of words, and the number of syllables that a word may contain. It has been made clear that statistics will have to take account of a good many circumstances if they are to be of use to the student of language; the student of the number of syllables in a language will have to make a point of distinguishing between form-words and full words. Any statistics that ignore such apparent details, and take account of the printed words only, will be useless to the linguist, or worse, if he should be so unwise as to base any reasoning on them. But the reader who has had the patience to read what precedes—for in spite

of my attempt to omit all details that are not essential I am afraid that some readers will find the study of it at least something of a task, even if a welcome task—may ask, and will be justified in asking whether the information gathered in this way means more than what is called interesting material for the observer of languages, in other words, whether it is likely to promote a fuller understanding of the mystery of speech.

If anyone can show that the single sounds that standard English makes use of are inseparably connected with the character of English language, perhaps even that the English language is characteristic of English speakers, an idea that is perfectly reasonable in theory, but will be found, or has been found more difficult of actual proof, this will no doubt be welcome to every student of English, or of any language: I shall not make the attempt. But that does not mean that I wish to refrain from any conclusion; for in such a case a reader would be justified in asking whether the work that has been necessary to write it was really worth the trouble. Special attention has been paid in the preceding pages to the ways in which words in English begin or end, and it is not a new discovery, or theory, that this has some bearing on the character of a language. An attempt to show this with reference to a large group of languages, or families of languages, was made by Wilhelm Schmidt in 1926, in his book *Die Sprachfamilien und die Sprachenkreise der Erde*, p. 282 ff. As the title of the book indicates, Schmidt studies the question with the material collected from a great number of languages, of speakers in the centres of civilization and of primitive speakers, whose languages are often little known, but are valuable because they supply types that would otherwise remain unrepresented in a comparison that inevitably gains part of its value from the range of languages that it gathers within its net. I leave the question undiscussed whether the explanations suggested tentatively by Schmidt of a connection between language and

culture can be definitely shown to hold their ground, for in this book I try to approach the problem from the very opposite point of view: the minute study of a single language that is as well known to the writer and to many readers as any language is likely to be. It is needless to point out that the two methods are not contradictory but rather supplementary and that each student will be wise in taking account of his own range of knowledge and his own limitations, both of knowledge and range of thinking. With regard to English we have seen that some consonant groups occur at the beginning and in the middle, never at the end, thus *pr* in *prince* and *apricot*. This means that the group is proof to an English hearer that what comes after *pr* cannot be an new word. The group *vr*, on the other hand, never occurs initially or finally, so that on hearing every in a sentence, i. e. *evrɪ*, or several i. e. *sevrəl*, he knows that these syllables must form words together, cannot belong to different words. This is not so unimportant as it may seem, for it is well-known that we do not really hear every sound of a sentence but make up what we do not actually hear from the rest. It is especially the final groups that characterize English words, above all the soft final consonant groups, so that words like *microbes* or *persuades*, which a hearer of little education may not know at all or at least be unfamiliar with, are immediately recognized as inflected forms. But it is not the final groups only that serve as signals to the hearer, the same applies to single final sounds, whether vowels or consonants, for in strong-stressed syllables, the final sound, as is taught in any book for beginners, is distinctly longer than in the middle, generally also longer than at the beginning of a word. Thus, the *t* of *pit* is quite clearly longer than the same sound in *pity*; in words of the type *pity* the consonant in English has its minimum length. The difference between final consonants and the same sounds in other positions is still more marked in the case of the soft sounds, as may be heard by contrasting

bad and ladder. The same difference, if less marked perhaps, is to be observed in the vowels, as in stay in contrast to state, and the difference remains in word groups, as in stay at home contrasted with state of things. The consequence of this is that the difference of quantity serves to mark the end of words, so that a considerable number of words (but the strong-stressed ones only, i. e. the more important words, speaking from the point of view of meaning) are marked in this way, put apart so to say, by their final sound. This is confirmed by the experience that an English hearer often recognizes a German speaker by the brevity of his final consonants, even when he speaks English reasonably well in other respects. And, on the other hand, as Sweet observed once, in his book on *The Practical Study of Languages*, the short final -n as in German mann, presents great difficulties to English learners. When one has such a succession of syllables for example as re-mem-ber, with the final -r or not, as the case may be, the short final m of mem shows conclusively that it cannot possibly be the end of a word, whereas the first syllable, with weak stress, may be part of a word or a form-word, between which, besides, the distinction is unimportant. Though, as has been stated, medial consonants have the minimum length, the existence of double medial consonants is no contradiction to this: it means that the consonant really belongs to the two successive syllables. Long medial consonants do not occur in English simple words; the double medial consonant characterizes the word as compound or as a word-group; thus there is a double consonant in the group: a mad doctor, and there may be in the compound: a mad doctor, although the word is not quite current perhaps, and if the stress in the compound is uneven, the quantity is lessened in consequence. Of course, there is the more important difference of intonation between the two words or word-groups. But we see from this example that it would be vain to attempt a strict distinction of compounds and

word-groups, as I pointed out long ago in *Handbook* ⁵, § 1582. When we compare a madman with a mad man, the difference is not primarily that the first word has a murmur-vowel in its second element, whereas the word-group has the strong vowel æ, as in the independent word man, but rather that in madman the -d- is short, whereas it is long in the group a mad man. This shows that the elements of compounds may be distinct in English, even though the compounds have even stress, like word-groups. In this respect English differs very considerably from Dutch and German, which have no corresponding differences in the length of consonants, whether at the end of words, or in the middle of compounds.

The greater independence of English words when compared to those of Dutch and German, the greater independence too of the elements of English compounds, explains, or helps to explain the familiar phenomenon that assimilation of voice or of place is far rarer in English than in the two other and in many respects still closely allied languages. In cases like width and breadth there is some assimilation of force but not of voice; in compounds such as backbite there is no assimilation at all, as I have pointed out with a good many other examples in *Taal en Maatschappij*. And such ordinary compounds as Dutch *toekomstdroom*, would be unheard of in English. In Dutch they are quite easy because we assimilate the medial group in such a way that there remains only the group -msdr- which is naturally cut up into ms-dr-, where the -s- shows that the t must be thought of as included, because otherwise we should say -mz-. But the systematic study of these questions makes it clear what is the ground, at least one of the grounds, of this difference between English and the continental Germanic languages: it is not only, as I argued in my lecture, that English has undergone the influence of systematic culture to a greater degree than Dutch or German, because its standard form of speech has been largely uniform for centuries, much longer

than standard Dutch, whereas standard German is something of the future, and evidently not of the near future (see *Taal en Leven* V. p. 106—109 and p. 189—192), but also because there are differences between the languages of people of an equal degree of culture as well as between these and the speakers of dialects and the speakers of what are vaguely called primitive languages. We may express this by saying that the degrees of cohesion between the elements of a sentence, and between the elements of words, whether simple or compound, vary in different languages. This makes it intelligible that some languages make a free use of composition as a means of word-formation, whereas others hardly use it or not at all. It also makes it clear why in loose word-groups with a common element some languages name the common element once only, whereas others repeat it. Thus, the German reader will find nothing remarkable in such groups as *der Schreib- und Leseunterricht, die Zeichen- und Bilderschrift, Bau- oder Brennstoff, takt- und rücksichtslos*, or the similar groups of the type: *ein Herunterklettern und -springen*, on which I have made some remarks in my *Einführung in die deutsche Syntax*, p. 68. The Dutch reader is familiar with such loose groups, as in *land- en tuinbouw* (agriculture and horticulture), *open aanmerkingen* (remarks and strictures), *wis- en natuurkunde* (mathematics and physics), on which Royen in *Taal en Leven* IV. has written an instructive article with plenty of materials from printed sources, showing to what absurdities this method, which is of course perfectly justified in principle, may lead would-be writers of correct or 'interesting' work. The process is familiarly known to students of Dutch and German, but in English the cases are far less plentiful, so that some readers may like to consult my *Handbook* ⁵, §§ 2052 ff. and the *English Grammar* § 157. The process is still less known in some other languages, such as French, so that it seems strange to speakers of such languages, even when they are linguists; thus, Bally in his comparison of French and German,

in *Linguistique générale et linguistique française*. He does not even understand the process, and prefers to give an estimate of its value, a common proceeding among students of language, but not one that is to be recommended, for it does not contribute to our understanding of the language concerned, and still less of language in general. Bally calls the process *une syntaxe d'emboîtement* ou *syntaxe enveloppante*, two terms that mean nothing and explain nothing, any more than the way Erich Drach treats the subject, in his otherwise admirable little book, *Grundgedanken der deutschen Satzlehre*, when he praises the German way of grouping such words with a common element as *Einklammerung*. Drach's attitude is parallel to that of Finck in a book on German sentence-structure, also admirable in many respects, though one-sided perhaps, *Der deutsche Sprachbau*, 1899. Finck is enthusiastic on the German habit of constructing sentences in such a way that one has to read them a dozen times before one fully understands them, a practice that was criticized by another German, Schopenhauer, long before Finck wrote his panegyric; the reader may find both passages in my *Einführung in die deutsche Syntax*, p. 131 f., so that I refrain from quoting any part of it. All these estimates, whether favourable or unfavourable, do not promote our understanding of the facts of speech, which I take it to be the primary duty of a student of language to promote. Science has primarily, if not exclusively, to do with explaining phenomena, not with estimating their value in respect to some part of human life, whatever the practical value of scientific discoveries may be. We must find out what is the cause of the procedure in Dutch and German, and the rarer English examples that have been quoted, and in doing this it is naturally important to distinguish between the natural and common use of the method of constructing these loose groups, and the affected or artificial cases some of which have been collected by Royen; the student of language is primarily, often exclusively,

concerned with the natural i. e. genuine processes of speech. The use of the groups with a common element mentioned once only are common in Dutch and German in the language of every day, but they are still more frequent in the language of scholars, when groups are used that would never occur in natural speech, without being unnatural for that reason: ordinary life and the communication of ideas among scholars have different needs, and there would be no sense in rejecting any means of expression because it does not suit both forms of human life, for in language as everywhere else, uniformity is death. The use of the groups, consequently, is a matter of style, partly, and the cause is evident: the language of learning has different needs to satisfy from those of the language of ordinary daily life, for it must be exact above all, and it must be brief if possible. Now it is evident that the groups that we have illustrated promote the logical cohesion of the elements, make them more compact. The ordinary speaker of the language may not need or may disapprove of groups that the scholar finds useful or convenient; and the same applies to the artist, who will naturally find less reason to use the groups than the scholar.

Our deeper insight into the structure of living speech naturally must have some influence on our understanding of the history of speech; and our greater knowledge of the structure of English as it is spoken to-day must make its influence felt on the study of the history of English. The experience of the value of the study of the single sounds of languages and their combination into syllables, which has been the chief part of phonetics as studied by linguists up to recent times, if studied at all, on the history of grammar need not be shown, for it is the commonplace of the class-room¹). And by analogy

¹) One point seems worth mentioning, because it appears to have been overlooked by many students of the history of English, although it is evident when once pointed out. The considerable differences in the quantity of English consonants according to their position in words accounts for the innumerable changes of English

it may be expected that the study of the use of sounds in the structure of words such as has been undertaken in this work, will make its influence felt on the historical study of words and their forms in the future; but it may be of some value if I show by some practical examples that such an influence is certain to be the result, for experience is more convincing to most minds than theory. On p. 11 I have already pointed out that the word *awe* is little used, which generally means that it is on the road to extinction, whereas the word *awful* and the adverb *awfully* are as much alive as any common word such as *house*. And yet, the word *awful* only contains one half syllable more than *awe*, and the syllabic sound is generally not a vowel but the vowellike *l*, and *awfully* is hardly pronounced otherwise than with a syllabic *l*, so that the difference in weight, at least between *awe* and *awful* is not considerable. But a word that consists of one single syllabic sound only lives a precarious life, and experience shows that many of them disappear in the course of time, when their meaning would hardly seem to be a reason for it. And it would be easy to collect a considerable number of Old English words of the type, still more of the type with an initial vowel, that have disappeared. The OE word *ea* for 'water' has disappeared, as also the corresponding Dutch word *a*, which exists only as a proper name in the river-name 'Drentse A', evidently because it was a member of a group and taken to be a proper name. In the same way OE *æ* for 'law' has disappeared, again like Dutch *ee*, but the latter continues to 'exist' in the compound *ega* 'lawful wife', although, of course, no modern Dutchman has the slightest idea that the word was once a compound. A similar case is presented by OE *ea*, which has disappeared, when we consider that the related word *iegland* has re-

vowels since the Old English period which have no parallel in such languages as Dutch and German where the consonants are always short. I need only refer to such modern forms as *tall* and *tallow*, *mar* and *marry*, *toll* and *hollow*, to *pass* and *passage*.

mained, though disguised as island, because it was imagined to be connected with the French loanword *isle*. This last word itself has practically disappeared as an independent word, but it is remarkable that it is freely used in word-groups such as *The British Isles*, *The Isle of Wight*, *The Isle of Man*; the study of the structure of words has taught us that this is not a freak of language, if such a thing exists at all, but what we might expect: the word has disappeared as belonging to an unusual type, but this was no reason for it to disappear as part of a word-group. Another remark may be added: the homonymous word *aisle* has remained, as a somewhat technical term. If *ire* has almost disappeared it should be asked first of all if it ever was more than a word used in books only. In the same way OE *eac* has disappeared, being replaced by also, and the etymologically related verb *to eke* is also practically unknown in living English, except in the group *to eke out*, which is to be compared to the compound verbs with a prefix in the other Westgermanic languages. It is not our task here to try and collect as many examples of these two types of words that have disappeared as we can; it may suffice to show that the study of word-types has suggested one more cause why words are apt to disappear.

The study of form-words must be undertaken separately, for it is well-known that they are more subject to disappearance than full words; thus, OE *ac* has indeed disappeared, but it may be due to other causes than its phonetic structure, for conjunctions are among the least stable elements of a language, as has been shown by Meillet, *Le Renouveau des Conjonctions*, in the collection *Linguistique historique et Linguistique générale*, p. 159—174, and for French itself by Lerch, in the first volume of his *Historische französische Syntax* (1925). The other Germanic languages lost the conjunction *ac* as well, and German at any rate at an earlier time; in German its place has been taken by *aber* and *sondern*, in

Dutch by *maar*, whereas in English it may be said to have been replaced by *but*. Of course, the term 'replaced' is really incorrect, for we know that two words are never really identical, and the fact that German uses two words, *aber* and *sondern*, is in itself proof of the incorrectness of the phrase 'replaced'.

It is not only the words that consist of a single vowel, or that begin with a vowel that have their history made a little clearer by the study of word-structure; the same can be shown for the words with initial and final consonants, especially with initial and final consonant groups. It has been shown that words with an initial syllabic sound are a small minority, and that some vowels are very rare in that position, whereas others do not occur initially at all. We might be inclined to connect this observation with the well-known fact that words with an initial vowel have often had *n-* prefixed which is easily accounted for as the result of the preceding indefinite article in the case of class-nouns; examples are the commonplaces of the textbooks, so that I mention one only: *nickname*. The phenomenon has been dealt with by Luick, *Hist. englische Grammatik*, § 741 (p. 994—7), under the heading of *Shifting of Syllable-division*, which is sufficient by way of explanation. Luick also thinks that the many shortened proper names that take *n-* in their affective use, such as *Nan*, *Ned* are to be accounted for in a similar way, by the prefixing of the pronoun *mine*. On the other hand, there are a small number of cases when the original *n-* has disappeared, the only current words of the type that Luick mentions being *adder*, *apron*, and *umpire*. Of course, the historical facts do not really explain the modern forms, as we naturally ask why *n-* has been added in some cases and not in others; next, why it has been dropped in some other cases. The prefixing of *n-* in the proper names may be connected with their shortness, and the unfamiliarity of the type of words in the nursery, whereas longer words are more frequent with initial syllabic sounds. In living

English the use of *my* before a proper name or a vocative, like *uncle*, is perfectly unknown as a form of address. Another case is presented by the stems with final *-z*, which have often been interpreted by speakers as plurals, whether they were plurals originally or not. We must distinguish between the words of one syllable, in single *-z* or in a soft consonant group, such as *stays* and *means*, and those of a strong syllable with a weak-stressed syllable, such as *scissors*. The history of English shows us that *stays*, *means*, *scales*, *tongs* are plurals in origin, and that *alms* is not, but this is of no importance to the student of living English. The important fact to such a student is that these words are all looked upon as inflectional, as also *riches*, though derived from the French *richesse*, and *news*, which was originally a genitive, and that they are looked upon as identical in form, whether the final sound indicates a suffix, as in the words with a soft consonant group such as *means* and *alms*, or might just as well be a stem, as in the case of *stays*. What is important about them is that they are looked upon as duals, as in the case of *stays* and *scissors*, which consequently take the numerative pair, or as collectives, as in the case of *news*, which takes the numerative piece or bit, whereas others like *alms* and *means*, though primarily collective, are also used as singular class-nouns. The words like *alms* and *means*, or *works*, may be grouped with such words as *deer*, *sheep*, *grouse*, which do not indicate number formally, because they are taken in a collective sense, or as members of a group, not individually. On this point, see *English Grammar* ⁶, §§ 258 ff. A different case is presented by such words as *riddle*, *girdle*, which had a final sibilant in earlier English, and were looked upon as plurals, and adopted the new stem without a sibilant, partly on the analogy of such English words as *thimble* and *handle*, or of French loanwords such as *bottle*, *castle*, *mantle*. The difference from the preceding group of nouns is that they have the character of undoubted class-nouns, and require the distinc-

tion of number accordingly. A word like eaves, OE efese, is taken as an inflected word, and the result is that a substantive eave and a verb to eave have been formed from it, though neither is in common use, but the old compounds eaves-dropping and eaves-dropper have remained unaffected. Here, too, it is not the form that has caused eaves to be taken for a plural, but its collective sense, just as pease has been taken for a plural, so that a new singular pea has arisen. These changes might be multiplied; the important point seems to be that it is not the form that has caused the change, if any, but the meaning of the words.

In other cases the form of the word gave rise to a new singular; this happened in the case of skates from Dutch schaats, which produced a new stem skate, because stems in -ts do not exist in English. But here, too, the dual meaning of the word naturally helped to make the change necessary. The absence of final -ts in English stems caused the Dutch words ets and schets to be borrowed under the forms etch and sketch; here, form only is the cause of the change. The history of English shows us why English had words in -tʃ and -dʒ since OE times, though we naturally ask the further question why English had fronting and assibilation in such words as much and bridge, whereas the other Germanic languages had not, except Frisian. It is clear that the history of a language does not really explain the present or even the past, but only shows the successive stages through which a language has passed. It seems appropriate to quote what Finck observed with regard to this, in his treatise on *Die Aufgabe und Gliederung der Sprachwissenschaft*, p. 15: Das gilt auch für die historische Grammatik, deren angebliche Zurückführung bestimmter Sprechweisen auf frühere ja nicht etwa eine Erklärung, sondern nichts anderes ist als eine Nebeneinanderstellung von zwei oder mehreren Sprechweisen, von denen die eine der anderen und diese vielleicht wieder einer anderen allerdings als Muster gedient hat, nicht aber deren Ursprung ist.

The study of the structure of words may help to account for the success in carrying through some spelling-pronunciations, and the failure of what might seem to be parallel cases. Thus, Katherine has an open medial consonant now, contrary to earlier English (cf. Kate), but the spelling has not succeeded in ousting the medial stop in Anthony, for the medial group *-np-* is hardly used at all, as we have seen above (p. 74 anthem.). On the other hand, plinth has its final open, in spite of its being a loan-word from French; it has thus become parallel to month. Many examples of *p* for earlier *t* are enumerated by E. Buchmann, in a Berlin dissertation: *Der Einfluss des Schriftbildes auf die Aussprache im Neuenglischen*, also published as a book by Priebatsch, Breslau, in the series *Sprache und Kultur der germanischen und romanischen Völker*, Reihe A, Heft 34, 1940. The book deals with some three thousand spelling-pronunciations, although it should be added that most of the words are proper names and words that are either obsolete or little used on account of their technical character. Still, there are many among them that are in common use, and the lists are far from complete, which would indeed be impossible, for want of material. Thus, there are no indications, as far as I know, that a word like catholic was formerly spoken with medial *-t-*, but it can hardly be otherwise, when we consider that it was borrowed from French, and there are numerous instances of a similar type, such as mathematics, arithmetic, cathedral, philanthropy. And what is more important: it should be considered, as I pointed out long ago in my review of Köppel's earlier book on the subject, in the *Literaturblatt für germ. und rom. Phil.* vol. 26 (1905), that many words that have not changed their pronunciation, as far as we can trace their history, have remained in sound what their spelling suggests because, in the speech of the educated, words have a far more independent existence than in the language of the illiterate; such words as library would hardly have continued unchanged if they had been

left to the tender mercies of the illiterate, who would almost certainly have cleared away one of the r's at least. And such a word as septuagenarian would have had no chance to continue unchanged if it had been left to the management of the speakers who never dream of any spelling after they have left school. We see, therefore, that the term spelling-pronunciation covers two distinct meanings: 1. a word that at some time in its history has changed its pronunciation in accordance with its spelling; 2. a word that has been introduced into English from its written form in some other language, whether living or dead. Buchmann's book deals, very properly, with the first group; but the number of words of the second class is very considerable, as we must conclude from the general considerations stated above, although it would be impossible, and unnecessary, to attempt their enumeration. And even when a change has taken place it is not always a case of 'disturbance of the historical development', as Buchmann puts it. Thus, there can be no doubt that the proper name Alfred had medial soft -v- in Old English and in Middle English, where the spelling Alured indicates it; Buchmann, on p. 248, in the chapter dealing with what he calls «Störung der Entwicklung von a + l + Konsonant», states: «Alfred lautet immer 'ælfred, Spuren der gesetzmässigen Entwicklung (sic) sind hier nicht nachweisbar.» That is true, indeed; for there has been no development here at all: the name became obsolete in the Middle English period, when everybody took the fashionable French names, as pointed out in my study on *Diminutieven* and *Affektieven* in *de Germaanse Talen*, p. 82 (*Mededelingen van de Ndl. Akademie van Wetenschappen* NR 5, no. 9, 1942). It may interest some readers that the name Alured occurs in Trollope's novel *The Prime Minister*; we may suspect that the actual bearer of the name was unaware of its 'identity' with the modern form Alfred, and that Trollope himself was no wiser. But the form is one more proof that the distinction here made

between the two classes of spelling-pronunciations is not nugatory.

Some remarks may be added to Buchmann's observations and collections, because they are of a general nature: one on the history of the aspirate, another on the words with *oi*, and a third on the final syllable of words like *hero*. As to the words with the aspirate, Buchmann very properly enumerates the numerous French loanwords, such as *hospital* and *habit* with an aspirate that is entirely due to spelling only; he distinguishes the words that have always been written with *h-* from those that in earlier English were written with an initial vowel, such as *habit*, formerly *abit*, but this is of no importance to the student of the character of living English. The position of the aspirate in present-day standard English requires some comment, however; and it seems the proper place here to deal with it. It need not be argued that from a physiological point of view the sound is not a consonant, and that we treat it as such in phonetics only, i. e. from a linguistic point of view. It occurs primarily at the beginning of strong-stressed words, whether of English origin or from French; secondarily it occurs in weak-stressed native words that have a corresponding strong-stressed form, such as the pronouns, *he*, *him*, *his*, *who* ¹⁾, but not *her*, which is worth remarking, although I have never seen it mentioned specially. The aspirate also occurs in the second element of English compounds, such as *fish-hook*, *dung-hill*, etc. But its position in the weak-stressed syllables of French loanwords is less secure: as Buchmann mentions incidentally, such a word as *hotel* is not rarely spoken without the aspirate; but there is quite a group of words from French in which the initial aspirate is frequently absent,

¹⁾ It need hardly be mentioned that relative *who* is meant; examples of the form with an initial weak-stressed vowel are to be found *passim* in Sweet's *Primer of Spoken English*. No comment is required to explain why the form without the aspirate is never used in continuative clauses.

indeed more often than not: those with initial h- and the murmur-vowel, such as harangue, heroic (in spite of the association with hero), hereditary, horizon ¹⁾. The reason for this seems clear: it is positively difficult to produce the aspirate before the murmur-vowel because it is the most weak-stressed vowel of all, and the aspirate, although it occurs in syllables that may be said to be weak-stressed, requires *some* muscular effort, which the murmur-vowel does not. We also see now why the pronoun *her*, when weak-stressed, does not lose its aspirate: it never occurs with such weak stress as to have a murmur-vowel, which would make it unrecognizable, making it identical with the indefinite article. The existence, if a precarious one, of initial h- in the words of this type is a characteristic sign of the peculiar character of living standard English.

As to the words with *oi*, it is well-known to students of the history of English that in earlier times they were identical with those that had a diphthong of the *ai*-type, which explains the frequent spellings *jine* for *join*, *destriors*, e. g. in the Oxinden Papers (1607—1642), edited with notes and an introduction by Dorothy Gardiner, Constable, 1933, *imply* for *employ* (*ib.*). And in the Wentworth Papers (1705—1739), published by Wyman and Sons in 1883, we find such a spelling as *twillet* for *toilet*, which shows that this pronunciation was current in the highest classes, for these letters are all by members of the ruling class, many of them in the diplomatic service ²⁾. A list of words with *oi* for which there are earlier proofs of a pronunciation with a diphthong of the *ai*-type is to be found in Buchmann's book, on p. 44—46; he remarks that the *oi*-pronunciation did not become general before the end of the

¹⁾ On silent medial h in such words as *vehicle*, *vehement*, *rehabilitation*, *annihilate*, as also in *exhaust*, *exhibit*, a remark is made in my *Introduction* ⁷, p. 148.

²⁾ I mention in passing that Lady Wentworth writes *close passim* for *clothes*.

eighteenth century. One early orthoepist, Nares, in a book published in 1784, declares: The banished diphthong (i. e. oi) seems at length upon its return.—But was it really a return? Luick, in his *Historische englische Grammatik* § 557,3, assumes a change of ai to oi in the latter half of the eighteenth century, but in note 2 to the same section he adds that the ‘development’ is not quite certain. The question may be asked whether there was any ‘development’ at all, and whether it is not more likely that *all* words that are now spoken with oi are spelling-pronunciations. This may seem revolutionary at first sight, but will become less so when we consider how small is the range of the diphthong oi in living English. In the first place it never occurs when it is not suggested by the spelling; this point is not unimportant in a language with a spelling that so often contradicts the real sounds as modern English. But, apart from this, it is quite easy to enumerate the cases when oi appears in living English; initially it occurs in oil, oyster, and ointment, finally in boy, buoy, coy, decoy, destroy, annoy, joy, toy, and cloy. Its occurrence before consonants in other cases than initially is also limited; it occurs before -l: boil, broil, coil, foil, gargoyles, soil, spoil, toil, toilet, doiley; before -n in join, joint, jointure, anoint, point, and the unusual coign (of vantage), not before -m and -ng. It occurs in several words before -s: choice, rejoice, voice, joist, hoist, moist, boisterous; hardly before -f, for coif is not a living word. Apart from the imitative hoity-toity, the technical quito, and the historical word doit, it does not occur before -t and before -d in void and avoid only. There are no words with oi before -th, -p, and -k. It occurs medially before a vowel in loyal, royal, buoyant, buoyancy; finally also in the nautical term ahoy. When we consider the large number of spelling-pronunciations in living standard English, and the difficulty of accounting for the presence of oi historically, it seems quite credible that the use of oi in modern English is the effect of the spelling, whatever English

dialects may have to say to the existence of the diphthong. Since writing the preceding sentence, I have had my attention drawn to Wyld's *Short History of English* ³ (1927), where in section 270 I find the following statement with regard to ME *oi*: 'This sound appears at the present time as (*oi*), but there is no doubt that this pronunciation is due to the spelling.' Wyld's arguments are of a historical nature, so that I leave my own text unaltered, as it supplies some additional material from the study of living English; his observation seems also to have escaped the attention of Luick, although he mentions Wyld's book in his bibliography.

A third group of words may be mentioned here: the words of two syllables in *-o*, such as *hero* and *grotto*, discussed on p. 63 f. It is significant that in the English dialects these words have been completely incorporated with those like *window*, i. e. they are spoken with final *-ə*, as observed by Wright in his *New English Grammar*, section 168. The standard pronunciation is clearly due to the spelling; the explanation also suggests a reason why *borough* and *thorough* are never spoken with the final diphthong: their spelling did not suggest *ou*.

One point regarding spelling-pronunciations in English may finally be noted: when we can trace their general introduction into the standard speech it is invariably the end of the eighteenth century or the beginning of the nineteenth that sees the last of the old pronunciation; the great majority of the spelling-pronunciations may be said to date of the nineteenth century, which thus witnesses to a new character of the language, for the number of these changes is so great that we cannot look upon them as insignificant. And the process is naturally continuing; thus, there seems little doubt that such a pronunciation as *children* with the *i* of *hit* is due to a recent change, for in the nineteenth century the word was generally, if not invariably, spoken with syllabic *l* by educated people. And a proper name like *Ralph*, which is now frequently

pronounced *rælf*, was probably invariably *reif* in the nineteenth century, which is at any rate suggested by my own experience. It sometimes happens even that one and the same word thus obtains a twofold pronunciation, or is split up into two words, as some may prefer to put it, for both pronunciations are used by the same speakers. Thus, the word *primer* is still spoken with checked *i* in its old sense of a prayer-book for the laity, and as a term of typography, but the 'classically trained', i. e. people with a smattering of Latin, have succeeded in persuading many speakers into using the diphthong when the word is used in its 'learned' sense of an elementary book on a subject of learning! We may conclude that the English of the nineteenth century has become a really new type of speech, dependent upon the written form of the words such as was never the case before, and is hardly found to such a degree in other European languages. And this new character of standard English is not limited to the sounds, it also extends to the structure of the sentence, especially to the independence of the words as members of the sentence. Some readers may be inclined to think that English does not really differ in its character from standard French or even from standard German (the *Schriftsprache*). There is one undeniable, and in my opinion fundamental difference, however: standard English is exclusively based on the actual use of educated speakers, without any reference to any authority of whatever kind may exist in other countries, such as the *Académie française* or government committees or grammarians in Germany. The growth of standard English undoubtedly differs from the development of English dialects, as I pointed out long ago in my lecture on *Taalen Maatschappij* (1909), but it has never been subject to any authority, except that of public opinion, which is indeed more authoritative than any officially established authority can really be. The development of standard English may be compared with that of the British Constitution, which

partly depends, indeed, on legal enactments, but most of these enactments are only the codification of the long-established practice of parliamentary life. It seems to me that German students of English frequently fail to understand fully how great the difference is between the language of the educated in England and in Germany; on this point I may refer the reader to two articles on the position of the German *Schriftsprache* in *Taal en Leven* V, p. 106 and 189. This character of standard English seems to be insufficiently taken into account by Herbert Koziol in his remarks in a review in *Englische Studien* 75, p. 75: *Die Sprachen sind ein für das Leben und Schicksal der Völker höchst bedeutungsvolles Gut, und sie können ihre wesentliche Funktion nur erfüllen, wenn sie vor individualistischer Willkür bewahrt werden. Dafür sorgt innerhalb der einzelnen Dialektgebiete das Sprachempfinden der Sprechenden, und in bezug auf die Gemeinsprachen sorgt dafür heute ausser der Schule und dem Schrifttum auch der Rundfunk in einem früher ungeahnten Ausmasse.*» This is not wrong but incomplete: even at the present day good usage, as the English call it, is primarily decided by 'good society', whatever may be the influences that decide the opinions of this society. And school at any rate plays a very small part, indeed, unless it is made to include the society of one's fellow-pupils; as to arbitrary individual influence, I take it that it is purely imaginary. How little the spoken language and the current form of written English differ, I have shown in my *Handbook*⁵, volume II, p. 434—474, and, more briefly, in my *English Grammar*⁶, p. 543—548. This is in complete agreement with the observations on standard English by Rose Macaulay in the *Essays and Studies* published annually by the English Association, vol. 20 (1935), quoted with some comment in *Taal en Leven* V., p. 211.

A brief remark may be made on the history of the English genitive, in addition to what has been observed (on p. 152 f.) on the suffix in living English. It is, of course,

generally known that the suffix is not treated in exactly the same way as the apparently identical one for the plural of most class-nouns; but this difference has never been quite satisfactorily accounted for. The theory that the suffix *-iz* might be the descendant of the old genitive pronoun *his* was formerly current, but hardly finds any advocate now. Yet, it is well-known that the use of the possessive pronouns (*his* and *her* and *their*) was once common in English as well as in Dutch and German, where it is still frequently used, although grammarians of the humanistic class have succeeded in ousting it from what is perhaps the 'official' language, whatever the term may exactly imply. It is unnecessary to quote Old English or Middle English examples, for they can be found in the historical grammars, very conveniently in Wright's *Elementary Historical New English Grammar*. But it does not seem to be so generally known that down to very recent times the old construction was perfectly alive, and in the language of the literate as well as of the illiterate. Thus, Ascham in the Scholemaster ed. Arber writes: *Socrates iudgement*, p. 42: *Darius tumbe*, p. 44; and in the first edition he wrote: *Salust writing*, p. 154 and 155, just as in *Terence name*, p. 143, *L. Crassus excellent wit*, p. 150, in *Augustus dayes*, p. 153, but in the second edition he changed *Salustes roughness*, p. 156, into *Salust his roughness*. In other words, he wrote, like Chaucer, the uninflected stem or the group with *his*. As to the first construction, the attributive use of the stem, we find it sprinkled over the pages of the private letters and documents of the seventeenth century, the Verney Memoirs, the letters of Lady Brilliana Harley, and others, so that it would be waste of space to quote samples. And even the theorists had nothing to say against it; at least John Wallis, the famous author of the *Grammatica anglicana*, wrote in the much neglected chapter *De Structura*, that the spelling *King Charles's Court*, *St. James's Park* may be useful, although it is not really necessary; his words

clearly imply that no sound was intended by the 's: plena scriptio... nunc dierum frequentius quam olim ¹⁾. Lady Mary Verney also writes the uninflected form in a group, as in this sentence: I was forced to take up £ 50 upon Will Roades and my own bond (vol. II, p. 246). Of course, we also find the group with his and the other pronouns in the Verney Memoirs edited by Lady Verney, where it is the usual form when the noun ends in a sibilant, but also in other cases: The Prince of Wales hiss commission, II. 339 f., etc. Other writers of the seventeenth century write in the same way: Elinerus his Epistles and Fulcherus Carustensis his Historie—Marianus his Chronicon (Letters of Em. Men of Letters, Camden Soc. p. 144). Also passim in Pepys, which I need not show here. In the Verney Memoirs we find the spelling Mr. Roads is death (III. 393), and there are examples in Dryden, Essays ed. Ker, I. 230. 4: Mr. Sandys his undertaking; ib. 237, 11: Horace his Art of Poetry, etc. The Specatator writes, in no. 183: Socrates his fetters. The group with his is also used when the noun does not end in a sibilant, as in Pepys (ed. Wheatly) I. 9: my lord Lambert his forces. Examples with the other pronouns: you should translate Canterbury and Chillingworth their books (Verney Memoirs II. 222), My sister Susan her new husband (ib. II. 199), etc. If we accept the view that the old construction with the 'possessives' comes in for something in the origin of the modern suffix -iz in the genitive, we have no difficulty in accounting for the unchanged stem in attributive use in Chaucer, and in later times, and also have an explanation for the difference between such modern forms as the genitive my mother-in-law's and the plural mothers-in-law, and the absence of a plural genitive to the indefinite case mothers-in-law. Of course, we need

¹⁾ The importance of the syntactic part of Wallis's book was pointed out in my review of Martin Lehnert's dissertation on Die Grammatik des englischen Sprachmeisters John Wallis (1616—1703), Priebatsch, Breslau, 1936, in the Beiblatt zur Anglia 47, p. 363 f.

not make a fetish of the 'new' and really very old view, and must remember that English differs in any case from Dutch and German in using one suffix only, whereas in the other two languages the old possessives have remained, with their distinctions of gender and number ¹⁾. Whatever may be thought of this, the fact must be faced that the genitive-suffix in living English is in many respects different from the forms of the suffix for the plural of nouns, the latter being formally identical with the triple suffix for the singular of the present of most verbs.

Perhaps we may also be able now to account for the disappearance in early ME of the conjunction *þe*, and the substitution of that, whereas the phonetically identical definite article and the demonstrative adverb of degree (the sooner the better) have held their ground. The conjunction it is true, is apt to disappear for the very reason that it is a conjunction, on which a remark was made above, on p. 164; but the 'general' conjunction is so frequent that it is least likely to disappear, and we find in French that many conjunctions disappear, even coordinating ones, which, of course, are in more frequent use than the subordinating ones, but the general conjunction *que* has been retained in French throughout its history. But OE *þe* had very little weight, and there was a possible successor in the competing *that*; the definite article was equally light, as also the adverb before comparatives, but they are invariably members of close groups, and retained their hold on people's minds in consequence. Want of phonetic weight may also be the reason why early ME *men* and its still weaker form *me* for OE *man* disappeared, without leaving a trace; it is true, that the indefinite one, with a non-syllabic be-

¹⁾ In Dutch the constructions are both common in unaffected educated speech, so that a layman would find it hard to say what is the difference between *Beets' Camera* and *Beets z'n Camera*; the latter makes the book more of a personal matter in the life of the author.

ginning and end, in later times served in some of the functions of the earlier *men* or *me*, but that hardly makes a difference, and the increase in the use of the predicative participle of occurrence may be of greater weight when we try to account for the disappearance of what might seem a most useful, indeed almost indispensable word. It is well-known that weight is of importance in words, and that in many cases repetition is resorted to in order to give more phonetic weight to a word; one example may be *o*, which is of an onomatopoetic nature: ... everything would be hugger-mugger. Rose Macaulay, *Crewe Train* II, ch. 10, 2, p. 170. Perhaps it is not fancy when we suggest that the history of OE *oððe* 'or', which appears in ME under the disguise of *oðer*,—which later produced modern *or*, is the result of this desire for more weight. The frequency of repetition in interjections need hardly be mentioned, but it may be pointed out that vowels used as interjections are often emphatically repeated by beginning it with an aspirate the second time, as in *oho*, *aha*. And this is done even in French, which never uses the aspirate in 'real' words at all, in spite of what may be said or written about 'l'hache aspirée'.

These remarks, scanty as they are, may suffice to convince the reader that a systematic study of the structure of words, such as has been outlined here, may teach us a good deal of what has seemed inexplicable in language. It may also be applied to earlier stages of languages, although the examination of living languages will form the safest basis and may show the way in the handling of the languages of the past. A thorough command of the language dealt with is one of the first requirements that will always have to be insisted on: in that case the kind of study of which a sample is offered here may promote our knowledge of the nature of speech in general as well as our knowledge of the languages that are specially studied.
